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A Compendium of Lake and Reservoir Data Collected by the National Eutrophication Survey in the Central United States

(U.S.) National Eutrophication Survey, Corvallis, OR

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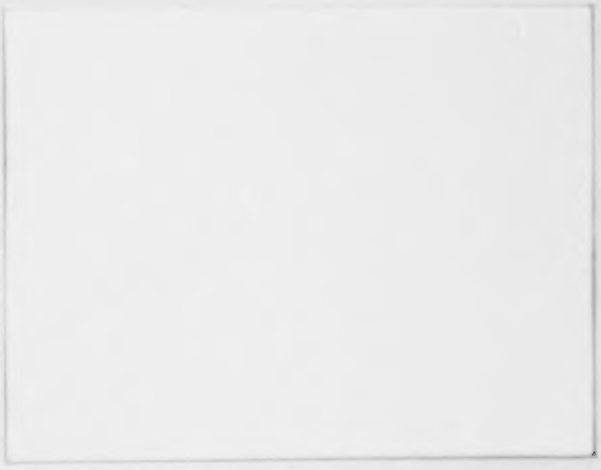

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16. ABSTRACT

Morphometric, limnological, and nutrient loading data are summarized for 153 lakes and reservoirs studied during 1974 by the U.S. Environmental Protection Agency's National Eutrophication Survey. The water bodies for which data are summarized are located in the states of Arkansas, Iowa, Kansas, Louisiana, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas.

17. KEY WORDS AND DOCUMENT ANALYSIS

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A COMPENDIUM OF LAKE AND RESERVOIR DATA COLLECTED BY THE NATIONAL EUTROPHICATION SURVEY IN THE CENTRAL UNITED STATES

WORKING PAPER NO. 476

September, 1978

INTRODUCTION

The National Eutrophication Survey (NES) was initiated in 1972 by the U.S. Environmental Protection Agency (EPA) to investigate the nationwide threat of accelerated eutrophication to freshwater lakes and reservoirs. In conjunction with State environmental agencies, the Survey developed information on nutrient sources, inputs, and impacts on selected freshwater lakes and reservoirs throughout the contiguous United States. In total, over 800 lakes and reservoirs, 4,200 tributaries and lake outlets, and 1,000 sewage treatment plants were included in the sampling programs which involved a joint field effort by EPA personnel, the National Guard of each State, operators of municipal and industrial waste treatment plants, and personnel of the respective State agency responsible for water pollution control activities. For details of the procedures and methods used in the geographical area encompassed in this report, refer to NES Working Paper No. 175, "National Eutrophication Survey Methods, 1973-1976".

One of the primary outputs of the NES program is the individual lake or reservoir report in which are summarized the trophic condition; the nutrient sources, loads, and controllability; and the limiting nutrient. Each report also includes all of the NES data pertaining to the water body, the drainage area, and the nutrient point sources. To make the NES data accessible to many users, data in each lake report have been summarized and compiled in this report which includes information on the water bodies sampled during the third year of the Survey

(1974). Geographically, this compendium includes data on lakes and reservoirs in Arkansas, Iowa, Kansas, Louisiana, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas.

Compendia of data on water bodies in other areas of the U.S. have been prepared. Working Paper No. 474 includes data on water bodies sampled in 1972 (northeast and part of north-central U.S.); Working Paper No. 475 provides data on water bodies sampled in 1973 (east, north-central, and southeastern States); and Working Paper No. 477 includes the data obtained in 1975 (Rocky Mountain and far-western States).

COMPENDIUM COMPONENTS

In the compendium heading for each water body, the identifiers are given (NAME, STATE, principal COUNTY, STORET NO., WORKING PAPER NO., and NTIS ACCESSION NO.). Following the NAME, the trophic condition of the water body is shown in parentheses.

The trophic condition is based on an assessment of the data collected during the sampling year supplemented by results of past studies, if any, and communications with State personnel. Each water body was categorized as "OLIGOTROPHIC" (low nutrient levels and productivity), "MESOTROPHIC" (moderate nutrient levels and productivity), "EUTROPHIC (high nutrient levels and productivity), or "HYPEREUTROPHIC" (very high nutrient levels and productivity). For large water bodies, two or more trophic categories maybe indicated; e.g., the major tributary embayments (nearest the nutrient sources) may be eutrophic while the main portion of the water body is mesotrophic.

Following the heading, the data are arranged in five categories:

I. MORPHOMETRY
II. PHYSICAL AND CHEMICAL CHARACTERISTICS
III. BIOLOGICAL CHARACTERISTICS
IV. NUTRIENT LOADING CHARACTERISTICS
V. NON-POINT SOURCE NUTRIENT EXPORT

Each of these categories contains related information as discussed below. If data were not obtained, a series of asterisks is shown.

I. MORPHOMETRY

The morphometric data were compiled from the literature and/or from information provided by State and Federal personnel.

LAKE TYPE - either of NATURAL origin or resulting from stream IMPOUNDMENT.

DRAINAGE AREA (SQ KM) - the total drainage area (measured to the outlet) in square kilometers.

SURFACE AREA (SQ KM) - the area of the water surface in square kilometers.

MEAN DEPTH (METERS) - the volume of the water body, in cubic meters, divided by the surface area in square meters.

TOTAL INFLOW (CMS) - the mean of the inflows of all tributaries and the immediate drainage in cubic meters per second.

RETENTION TIME (YEARS or DAYS) - a mean value determined by dividing the lake volume, in cubic meters, by the mean annual outflow in cubic meters per unit of time. Note that the outflow maybe less than the total inflow because of evaporation; withdrawals for irrigation, public water supply, or other uses are included in the outflow.

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

These data are based on the sampling of each water body in the spring, summer, and fall of 1974. Depending on size, from one to many

sites were sampled, and multiple depths usually were sampled at each site. For every parameter in this category, except Secchi disc depth, the median value is reported. The median represents the middle value of all sampling stations, times, and depths. The mean of the SECCHI DISC depths at all stations and all sampling times is given.

MEDIAN ALKALINITY (MG/L) - total alkalinity, as $CaCO_3$, in milligrams per liter.

MEDIAN CONDUCTIVITY (UMHOS) - specific conductance at 25°C in micromhos per centimeter.

MEAN SECCHI DISC (METERS) - the mean limit of visibility of a standard Secchi disc in meters.

MEDIAN TOTAL PHOSPHORUS (MG/L) - as P in milligrams per liter.

MEDIAN DISSOLVED PHOSPHORUS (MG/L) - as P in milligrams per liter.

MEDIAN INORGANIC NITROGEN (MG/L) - nitrate + nitrite + ammonia, as N, in milligrams per liter.

MEDIAN TOTAL NITROGEN (MG/L) - Kjeldahl nitrogen + nitrate + nitrite, as N.

III. BIOLOGICAL CHARACTERISTICS

MEAN CHLOROPHYLL A (UG/L) - the mean concentration of all samples, in micrograms per liter.

ALGAL ASSAY CONTROL YIELDS (MG/L-DRY WT) - for many of the water bodies are based on values, in milligrams per liter dry weight, obtained from samples collected during the first (spring) and last (fall) samplings. The values shown represent the range of yields, and the number following in parentheses indicates the number of samples assayed. The test organism was Selenastrum capricornutum Printz.

LIMITING NUTRIENT (no units) - may be determined by two procedures which are (1) the growth response of Selenastrum capricornutum to the addition of various amounts of phosphorus or nitrogen or (2) the ratio of inorganic nitrogen to dissolved phosphorus determined from the sampling data. When the inorganic nitrogen

to dissolved phosphorus ratio is 14/1 or greater, the water body is considered phosphorus limited, whereas ratios of less than 14/1 are considered indicative of nitrogen limitation.

The LIMITING NUTRIENT at each sampling time is given. Except for the first and last sampling dates, the limiting nutrient is based on the N/P ratio. The limiting nutrient for the first and last sampling date generally is based on algal assay results. However, if no value is shown for the ALGAL ASSAY CONTROL YIELD, the limiting nutrient for those dates is determined by the N/P ratio. Where "ND" is shown, nutrient data were not obtained, and the limiting nutrient cannot be determined.

SUMMARY OF PHYTOPLANKTON DATA - the COUNT of individuals, filaments, or colonies per milliliter of sample for each of the five most numerous genera on the date shown. The sum of the units of other genera present in the sample, but not specified, is also included.

IV. NUTRIENT LOADING CHARACTERISTICS

Nutrient loads of significant tributaries and the water body outlet(s) were calculated using the results of analyses of from 12 to 14 samples collected from each stream by the State National Guard monthly for a one-year period and stream flow estimates as provided by the U.S. Geological Survey through an interagency agreement. The nutrient loads of the unsampled portion of the drainage areas were estimated from the measured nutrient loads in the sampled streams in the area. Nutrient loads of all streams and the unsampled drainage area were estimated on the basis of a year of average or "normal" stream flow to minimize the influence of extreme hydrological events that may have occurred during the sampling year.

Sewage treatment plant nutrient loads were determined from results of analyses of from 5 to 14 monthly effluent samples and corresponding flow data provided by plant operators or by State agency personnel. For sewage treatment plants which were not sampled and those from which fewer than five samples were received, nutrient discharges were estimated on the basis of the population served by the facility.

For details of sampling procedures and methods of calculation, refer to NES Working Paper No. 175.

A. INPUT - an estimate of all external inputs of nitrogen and phosphorus to the water body.

POINT SOURCE MUNICIPAL (KG/YR) - an estimate of annual nitrogen and phosphorus inputs from municipal sewage treatment plants in kilograms per year.

POINT SOURCE INDUSTRIAL (KG/YR) - an estimate of annual nitrogen and phosphorus inputs from industrial waste treatment plants in kilograms per year.

POINT SOURCE SEPTIC TANKS (KG/YR) - an estimate of annual nitrogen and phosphorus inputs from septic tanks within approximately 90 meters of the shoreline in kilograms per year. If a value is shown for nitrogen but not phosphorus, the estimated phosphorus input was less than 5 kg.

NON-POINT SOURCE (KG/YR) - an estimate of the annual nitrogen and phosphorus inputs from tributaries, immediate drainage, and precipitation in kilograms per year.

TOTAL LOADING (KG/YR) - the sum of all external nitrogen and phosphorus inputs.

LAKE SURFACE AREA LOADING RATE (G/SQ M/YR) - the total loading for the sampling year divided by the lake surface area ($\frac{kg/yr}{km^2} \times 10^{-3}$) in grams per square meter of surface area per year.

B. OUTPUT - an estimate of the annual nitrogen and phosphorus discharged through the lake OUTLET(S) (KG/YR) in kilograms per year. Asterisks indicate little or no outlet flow (and output) during the sampling year.

PERCENT RETENTION - the percentage of incoming nitrogen or phosphorus retained in the lake annually:

$$\left(\frac{\text{Input load-output load}}{\text{input load}} \times 100\%\right).$$

V. NON-POINT SOURCE NUTRIENT EXPORT

STREAM NAME -

MEAN FLOW (CMS) - the mean stream flow in a year of average hydrology in cubic meters per second.

DRAINAGE AREA (SQ KM) - the drainage area of the stream in square kilometers.

MEAN TOTAL P (MG/L) - the mean concentration of total phosphorus in the stream at the sampling site during the year of sampling.

MEAN TOTAL N (MG/L) - the mean concentration of total nitrogen in the stream at the sampling site during the year of sampling.

TOTAL P EXPORT (KG/SQ KM/YR) - the total phosphorus load of the stream (after subtracting known point-source loads) divided by the drainage area, in kilograms per square kilometer per year. Asterisks indicate the phosphorus was less than 0.1 kg if a value is shown for nitrogen.

TOTAL N EXPORT (KG/SQ KM/YR) - the total nitrogen load of the stream (after subtracting known point-source loads) divided by the drainage area, in kilograms per square kilometer per year.

AVAILABILITY OF WORKING PAPERS

Compendium users desiring more detailed information may obtain a copy of the report on the water body of interest. Requests to the National Eutrophication Survey should include the NAME of the water body and the WORKING PAPER NO. as shown in the compendium heading.

Requests may be addressed to:

National Eutrophication Survey, EPA
Corvallis Environmental Research Laboratory
200 S.W. 35th Street
Corvallis, OR 97330

Only limited numbers of the Working Papers can be provided by NES. When these are exhausted, Working Papers can be obtained from:

National Technical Information Service
Department of Commerce
Springfield, VA 22161

The NTIS accession number is shown in the compendium heading. A blank or a series of zeros indicates numbers that were not available at the time of this printing; these accession numbers can be obtained from NES at the address shown on page 7.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - BEAVER RESERVOIR (MESOTROPHIC)
COUNTY - BENTON, CARROLL + WASHINGTON
STORET NO. - 0501 WORKING PAPER NO. 480. NTIS ACCESSION NO. PB-268 362/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	3087.30	114.20	17.8	42.450	1.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
49.	94.	2.1	0.022	0.006	0.330	0.610

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
3.9	0.1 - 3.6 (2)	(4/ 5/74) P	(6/18/74) P	(8/30/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/ 5/74 GENERA	COUNT	8/30/74 GENERA	COUNT	10/ 9/74 GENERA	COUNT
CRYPTOMONAS	475	LYNGBYA	549	CENTRIC DIATOM	172
MELOSIRA	412	SYNEDRA	549	MELOSIRA	172
CHROOMONAS	380	CHROOMONAS	335	SKELETONEMA	103
STEPHANODISCUS	190	NITZSCHIA	335	CRYPTOMONAS	69
DACTYLOCOCCOPSIS	95	MELOSIRA	244	TETRAEDRON	69
OTHER	128	OTHER	913	OTHER	137
TOTAL	1680	TOTAL	2925	TOTAL	722

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	45860.	**********	10.	36140.	82010.
NITROGEN	159785.	**********	385.	1448335.	1608505.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	18580.	77.	0.72
NITROGEN	1110180.	31.	14.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WHITE RIVER	14.750	1036.0	0.046	0.695	10.*	428.*
WAR EAGLE CREEK	10.880	802.9	0.038	1.140	15.	487.
WHITENER BRANCH	0.520	39.9	0.031	1.800	11.	1042.
BRUSH CREEK	0.680	51.8	0.023	1.166	9.	501.
RICHLAND CREEK	4.270	318.6	0.027	0.812	11.	356.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
BIG CLIFTY CREEK	0.027	0.677
DRY CREEK	0.038	1.243
PRAIRIE CREEK	0.021	2.147

* ESTIMATED

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - BULL SHOALS RESERVOIR (MESOTROPHIC)
COUNTY - BAXTER, BOONE, MARION, AR; TANEY, OZARK, MO
STORET NO. - 0504 WORKING PAPER NO. 480. NTIS ACCESSION NO. PB-268 362/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	15672.10	183.89	20.4	165.040	259.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
131.	223.	3.4	0.015	0.004	0.380	0.530

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
3.9	0.1	(4/ 6/74) P (6/20/74) P (9/ 4/74) P (10/15/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/ 6/74		6/20/74		9/ 4/74		10/15/74	
GENERA	COUNT	GENERA	COUNT	GENERA	COUNT	GENERA	COUNT
MELOSIRA	680	FRAGILARIA	927	CHROOMONAS	181	CHROOMONAS	252
CHROOMONAS	375	CHROOMONAS	232	MOUGEOTIA	109	MELOSIRA	189
STEPHANODISCUS	357	CRYPTOMONAS	165	CRYPTOMONAS	72	CRYPTOMONAS	126
CRYPTOMONAS	285	APHANIZOMENON	132	ANABAENA	36	FRAGILARIA	126
SYNEDRA	210	APHANOTHECE	66	APHANIZOMENON	36	TETRAEDRON	94
OTHER	285	OTHER	166	OTHER	36	OTHER	125
TOTAL	2192	TOTAL	1688	TOTAL	470	TOTAL	912

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1475.	**********	35.	101670.	103180.
NITROGEN	4420.	**********	1225.	6945940.	6951585.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	64915.	37.	0.56
NITROGEN	3777390.	46.	37.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
EAST SUGAR LOAF CREEK	0.710	77.2	0.010	0.451	3.	133.
WEST SUGAR LOAF CREEK	0.640	68.9	0.010	0.586	3.	175.
BEAR CREEK	3.230	344.5	0.015	0.546	3.	178.
BEE CREEK	0.690	76.7	0.009	0.246	3.	70.
LAKE TANEYCOMO -WHITE R.	123.520	11297.6	0.017	0.792	8.	535.
SWAN CREEK	4.970	440.3	0.008	0.532	3.	190.
BEAVER CREEK	8.200	924.6	0.010	0.596	1.	161.
BIG CREEK	1.070	113.4	0.015	0.587	4.	180.
GULLY SPRING CREEK	0.240	29.8	0.011	0.487	3.	123.
BARREN FORK	1.000	111.4	0.010	0.440	3.	133.
TURKEY CREEK	0.870	93.8	0.012	0.749	4.	203.
NORTH FORK WHITE RIVER	1.600	161.4	0.012	0.714	3.	211.
POND FORK	83.700	0.8	0.011	0.760	342.	25546.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
MOCCASIN CREEK	0.013	0.377
JIMMIE CREEK	0.009	0.385
CANE CREEK	0.016	0.819
SHOAL CREEK	0.013	0.524
BLUE CREEK	0.013	0.868
DESHIELDS CREEK	0.017	0.726

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - TABLE ROCK RESERVOIR (MESOTROPHIC)
COUNTY - BOONE, CARROLL, AR; BARRY, TANEY, MO
STORET NO. - 0515 WORKING PAPER NO. 480, NTIS ACCESSION NO. PB-268 362/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	10411.80	174.42	19.1	114.800	330.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
97.	175.	2.3	0.022	0.007	0.350	0.600

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
9.1	0.1 - 5.4 (2)	(4/ 5/74) P	(6/19/74) P	(9/ 4/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/ 5/74 GENERA	COUNT	6/19/74 GENERA	COUNT	9/ 4/74 GENERA	COUNT	10/11/74 GENERA	COUNT
MELOSIRA	992	CHROOMONAS	264	ACHNANTHES	17906	ACHNANTHES	13893
FRAGILARIA	771	MOUGEOTIA	231	RAPHIDIOPSIS	1601	DACTYLOCOCCOPSIS	1393
STEPHANODISCUS	661	TETRAEDRON	231	CENTRIC DIATOM	679	TETRAEDRON	503
CENTRIC DIATOM	257	CRYPTOMONAS	198	PENNATE DIATOMS	582	CRYPTOMONAS	232
CHROOMONAS	220	ANKISTRODESMUS	132	CHROOMONAS	338	CHROOMONAS	193
OTHER	405	OTHER	530	OTHER	1215	OTHER	427
TOTAL	3306	TOTAL	1586	TOTAL	22321	TOTAL	16641

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	214095.	**********	35.	45290.	259420.
NITROGEN	504120.	**********	1285.	4360855.	4866260.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	66555.	74.	1.49
NITROGEN	6008260.	LOSS	27.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WHITE RIVER	42.360	3071.7	0.015	1.115	6.	458.
LITTLE INDIAN CREEK	0.270	49.2	0.012	1.618	2.	269.
HAILEY CREEK	0.190	36.3	0.017	2.034	2.	341.
JAMES RIVER	25.990	2556.3	0.235	3.384	3.*	308.*
FLAT CREEK	5.770	740.7	0.023	2.602	4.	664.
ROCK CREEK	0.450	77.7	0.015	0.974	2.	176.
ROARING RIVER	0.990	155.4	0.025	2.016	3.	393.
BUTLER CREEK	0.350	62.2	0.011	0.954	2.	163.
KINGS RIVER	15.790	1377.9	0.067	1.362	4.	502.
LUNG CREEK	3.220	440.3	0.025	1.657	3.*	308.*
YOKUM CREEK	1.650	165.8	0.018	2.360	4.	504.

* ESTIMATED

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MISSOURI

NAME - LAKE TANEYCOMO (EUTROPHIC)
COUNTY - TANEY
STORET NO. - 2904 WORKING PAPER NO. 480. NTIS ACCESSION NO. PB-268 362/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	11297.60	12.22	5.8	123.810	7.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
96.	155.	2.0	0.023	0.007	0.530	0.720

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
		(4/10/74) P	(6/19/74) P	(8/30/74) P	(10/ 4/74) P
9.8	0.1 - 1.0 (2)				

SUMMARY OF PHYTOPLANKTON DATA

4/10/74 GENERA	COUNT	6/19/74 GENERA	COUNT	8/30/74 GENERA	COUNT	10/ 4/74 GENERA	COUNT
STEPHANODISCUS	625	CHROOMONAS	127	DINOBRYON	179	ACHNANTHES	2486
MELOSIRA	459	CYCLOTELLA	85	KIRCHNERIELLA	179	CRYPTOMONAS	163
CRYPTOMONAS	125	DINOBRYON	85	MELOSIRA	135	CHROOMONAS	122
SYNEDRA	125	NITZSCHIA	85	ACHNANTHES	134	MELOSIRA	82
DIATOMA	42	TETRAEDRON	85	CRYPTOMONAS	90	COSMARIUM	41
OTHER	83	OTHER	170	OTHER	178	OTHER	82
TOTAL	1459	TOTAL	637	TOTAL	895	TOTAL	2976

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	5125.	**********	10.	69010.	74145.
NITROGEN	9555.	**********	415.	6234120.	6244090.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	87280.	LOSS	6.07
NITROGEN	6038630.	3.	511.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WHITE RIVER	116.980	10417.0	0.021	1.331	6.	577.
ROARK CREEK	0.580	48.4	0.010	0.683	2.	126.
BULL CREEK	3.880	523.2	0.013	1.393	3.	293.
TURKEY CREEK	0.510	88.1	0.020	0.932	2.	174.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
BEE CREEK	0.017	0.923

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - BLACKFISH LAKE (HYPEREUTROPHIC)
COUNTY - CRITTENDEN, ST. FRANCIS
STORET NO. - 0502 WORKING PAPER NO. 481. NTIS ACCESSION NO. PB-268 287/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	288.80	1.62	1.8	287.100	8.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
33.	88.	0.1	0.424	0.090	1.470	2.425

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
19.8	11.9 - 28.4 (2)	(3/26/74) P AND N (6/ 4/74) P (10/16/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/26/74 GENERA	COUNT	6/ 4/74 GENERA	COUNT	10/16/74 GENERA	COUNT
EUGLENA	116	CRYPTOMONAS	475	NITZSCHIA	1767
CHROOMONAS	93	FLAGELLATES	238	CRYPTOMONAS	1556
NITZSCHIA	93	TRACHELOMONAS	238	CHLAMYDOMONAS	1346
PHORMIDIUM	46	EUGLENA	59	EUGLENA	1136
GYROSIGMA	23	LEPOCINCLIS	60	DACTYLOCOCCOPSIS	1093
OTHER	117	OTHER	59	OTHER	4627
TOTAL	488	TOTAL	1129	TOTAL	11525

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	5.	112130.	112135.
NITROGEN	**********	**********	275.	390625.	390900.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	92130.	18.	69.22
NITROGEN	303920.	22.	241.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM	3.650	247.3	0.892	3.073	384.	1376.
DITCH #1	0.540	37.0	0.936	2.696	430.	1214.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - BLUE MOUNTAIN LAKE (EUTROPHIC)
COUNTY - LOGAN, YELL
STORET NO. - 0503 WORKING PAPER NO. 482, NTIS ACCESSION NO. PB-268 314/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1263.90	11.74	2.6	14.610	25.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
20.	85.	0.4	0.058	0.010	0.160	0.480

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
9.0	0.8 - 1.9 (2)	(3/28/74) N	(6/ 6/74) P	(10/18/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/28/74 GENERA	COUNT	6/ 6/74 GENERA	COUNT	10/18/74 GENERA	COUNT
MELOSIRA	2302	MELOSIRA	3828	MELOSIRA	1830
CHROOMONAS	1069	EUGLENA	58	STEPHANODISCUS	790
DACTYLOCOCCOPSIS	781	NITZSCHIA	58	CHLAMYDOMONAS	333
CRYPTOMONAS	247	ANABAENA	29	DACTYLOCOCCOPSIS	166
ASTERIONELLA	164	CRUCIGENIA	29	OSCILLATORIA	166
OTHER	288	OTHER	29	OTHER	374
TOTAL	4851	TOTAL	4031	TOTAL	3659

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	5065.	**********	5.	11780.	16850.
NITROGEN	4295.	**********	250.	419955.	424500.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	31255.	LOSS	1.44
NITROGEN	343495.	19.	36.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
PETIT JEAN RIVER	10.680	898.7	0.047	0.933	10.	383.
DRY CREEK	0.390	33.7	0.020	0.548	7.	213.
SUGAR CREEK	1.770	151.3	0.019	0.461	7.	184.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED STREAM C1	0.022	0.644
CEDAR CREEK	0.028	0.913

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - LAKE CATHERINE (EUTROPHIC)
COUNTY - GARLAND, HOT SPRING
STORET NO. - 0505 WORKING PAPER NO. 483. NTIS ACCESSION NO. PB-266 776/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	3926.40	7.85	5.5	65.660	8.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
17.	62.	1.2	0.029	0.006	0.180	0.430

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
14.0	0.7 - 1.0 (2)	(3/26/74) P	(6/ 5/74) P	(10/15/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/26/74 GENERA	COUNT	6/ 5/74 GENERA	COUNT	10/15/74 GENERA	COUNT
MELOSIRA	2272	SKELETONEMA	3885	SCENEDESMUS	517
SKELETONEMA	1386	CHROOMONAS	226	PENNATE DIATOMS	487
CYCLOTELLA	501	MELOSIRA	181	NITZSCHIA	457
FLAGELLATES	462	CENTRIC DIATOM	181	MELOSIRA	244
CHROOMONAS	424	PENNATE DIATOMS	158	DACTYLOCOCCOPSIS	213
OTHER	1309	OTHER	541	OTHER	640
TOTAL	6354	TOTAL	5172	TOTAL	2558

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	42410.	**********	15.	36410.	78835.
NITROGEN	127190.	**********	620.	1060970.	1188780.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	49340.	37.	10.04
NITROGEN	1735280.	LOSS	151.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
OUCHITA RIVER	62.530	3732.2	0.021	0.681	9.	270.
GULPHA CREEK	2.100	129.5	0.157	0.674	12.*	237.*
TIGHE CREEK	0.510	32.1	0.025	0.446	12.	237.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
COOPER CREEK	0.014	0.255

* ESTIMATED

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - HAMILTON LAKE (EUTROPHIC)
COUNTY - GARLAND
STORET NO. - 0510 WORKING PAPER NO. 483. NTIS ACCESSION NO. PB-266 776/AH

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	3732.20	24.28	9.7	62.700	43.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
14.	50.	1.4	0.024	0.006	0.130	0.420

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
10.9	0.4 - 10.2 (3)	(3/27/74) N	(6/ 5/74) P	(10/15/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/27/74 GENERA	COUNT	6/ 5/74 GENERA	COUNT	10/15/74 GENERA	COUNT
CENTRIC DIATOM	2543	LYNGBYA	528	DACTYLOCOCCOPSIS	1976
MELOSIRA	831	MERISMOPEDIA	302	STEPHANODISCUS	553
NITZSCHIA	294	MELOSIRA	220	CRYPTOMONAS	435
ANKISTRODESMUS	293	DACTYLOCOCCOPSIS	189	SCENEDESMUS	318
CRYPTOMONAS	245	ANABAENA	188	LYNGBYA	237
OTHER	440	OTHER	605	OTHER	2094
TOTAL	4646	TOTAL	2038	TOTAL	5613

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	86190.	**********	75.	35440.	71705.
NITROGEN	108165.	**********	2845.	798955.	909965.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	34035.	53.	2.95
NITROGEN	1008320.	LOSS	37.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
OUACHITA RIVER	45.160	2861.9	0.011	0.442	8.	197.
LITTLE MAZARN CREEK	2.320	115.0	0.032	0.653	19.	422.
MAZARN CREEK	4.150	204.9	0.018	0.281	11.	180.
HALLMANS CREEK	1.230	61.6	0.019	0.231	12.	159.
GLAZYPEAU CREEK MI	1.780	88.6	0.032	0.372	15.	227.
HULL BAYOU	1.040	52.3	0.015	0.353	9.	150.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
MT. CARMEL CREEK	0.027	0.342
FOURCHE A LOUPE CREEK	0.012	0.437
GLAZYPEAU CREEK M2	0.022	0.258

HOT SPRINGS CREEK A1 *	0.959	9.161
HOT SPRINGS CREEK A2	0.092	7.788

* BELOW POINT SOURCE.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - OUACHITA LAKE (MESOTROPHIC)
COUNTY - GARLAND, MONTGOMERY
STORET NO. - 0514 WORKING PAPER NO. 483. NTIS ACCESSION NO. PB-266 776/AR

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	2861.90	162.28	16.3	43.600	1.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
22.	69.	2.8	0.015	0.006	0.155	0.335

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
4.3	0.1 - 0.6 (2)	(3/25/74) P AND N (6/ 6/74) P (10/17/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/25/74 GENERA	COUNT	6/ 6/74 GENERA	COUNT	10/17/74 GENERA	COUNT
CRYPTOMONAS	110	FRAGILARIA	797	LYNGBYA	266
CHROOMONAS	73	MELOSIRA	728	CHROOMONAS	233
CENTRIC DIATOM	37	CHROOMONAS	693	APHANIZOMENON	200
		TABELLARIA	520	DACTYLOCOCCOPSIS	200
		ASTERIONELLA	104	ANACYSTIS(MICHOCYSTIS)	167
OTHER	0	OTHER	173	OTHER	633
TOTAL	220	TOTAL	3015	TOTAL	1699

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	590.	**********	10.	27470.	28070.
NITROGEN	1535.	**********	430.	734865.	736830.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	23445.	16.	0.17
NITROGEN	565150.	23.	4.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
OUACHITA RIVER	22.680	1248.4	0.018	0.433	11.	285.
WALNUT CREEK	0.270	22.4	0.026	0.248	10.	88.
TWIN CREEK	0.340	27.5	0.018	0.345	7.	101.
SOUTH FORK OUACHITA R.	2.550	165.8	0.019	0.373	9.	183.
MUDDY CREEK	1.320	105.4	0.022	0.467	8.	173.
IRONS FORK	2.100	167.8	0.024	0.612	9.	167.
NORTH FORK	1.740	138.8	0.017	0.356	6.	148.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
DALEY CREEK	0.018	0.720
BIG BLAKELY CREEK	0.020	0.260

LITTLE BLAKELY CREEK	0.020	0.387

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME = CHICOT LAKE (EUTROPHIC)
COUNTY = CHICOT
STORET NO. = 0500A WORKING PAPER NO. 490. NTIS ACCESSION NO. PB-268 303/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1040.40	21.05	2.7	13.620	49.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
85.	189.	0.4	0.182	0.089	0.450	1.200

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L-DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
13.7	8.5 - 13.8 (2)	(3/26/74) N	(6/ 5/74) P	(10/16/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/26/74 GENERA	COUNT	6/ 5/74 GENERA	COUNT	10/16/74 GENERA	COUNT
STEPHANODISCUS	1984	MERISMOPEDIA	566	CYANOPHYTON FILAMENTS	2281
MELOSIRA	308	MELOSIRA	536	MELOSIRA	1313
CRYPTOMONAS	246	CRYPTOMONAS	447	FLAGELLATES	726
ACTINASTRUM	154	OSCILLATORIA	209	STEPHANODISCUS	726
DACTYLOCOCCOPSIS	92	CYCLOTELLA	179	SYNEDRA	311
OTHER	92	OTHER	1072	OTHER	1383
TOTAL	2856	TOTAL	3009	TOTAL	6740

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	5.	142530.	142535.
NITROGEN	**********	**********	250.	872935.	873185.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	115735.	19.	6.66
NITROGEN	700980.	20.	40.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CONNELLY BAYOU	12.710	932.4	0.441	2.043	139.	829.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED CREEK #1	0.513	2.036
FERRY BAYOU	0.408	1.768

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - DEGRAY RESERVOIR (MESOTROPHIC)
COUNTY - CLARK, HOT SPRING
STORET NO. - 0507 WORKING PAPER NO. 485. NTIS ACCESSION NO. PB-268 394/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1173.30	54.23	14.9	19.760	477.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
24.	49.	2.1	0.019	0.004	0.130	0.420

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
12.3	0.1 - 0.4 (2)	(3/25/74) P AND N	(6/ 3/74) P	(10/16/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/25/74 GENERA	COUNT	6/ 3/74 GENERA	COUNT	10/16/74 GENERA	COUNT
ANKISTRODESMUS	287	TABELLARIA	6083	NITZSCHIA	238
DINOBRYON	223	MELOSIRA	1182	ANKISTRODESMUS	214
MELOSIRA	191	CHROOMONAS	634	CHROOMONAS	214
ASTERIONELLA	159	APHANIZOMENON	317	MOUGEOTIA	167
TABELLARIA	159	OSCILLATORIA	317	RAPHIDIOPSIS	143
OTHER	606	OTHER	663	OTHER	1002
TOTAL	1625	TOTAL	9196	TOTAL	1978

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1375.	**********	30.	10345.	11750.
NITROGEN	4120.	**********	1135.	188135.	193390.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	10270.	13.	0.22
NITROGEN	268460.	LOSS	3.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CADDO RIVER	13.880	784.8	0.021	0.231	9.	128.
WHITENER CREEK	0.260	19.7	0.013	0.149	5.	68.
BIG HILL CREEK	0.270	18.1	0.015	0.218	7.	106.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
LONG CREEK	0.022	0.238
BRUSHY CREEK	0.020	0.414
PHILIPPI CREEK	0.015	0.364
POINT CEDAR CREEK	0.022	0.245

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - LAKE ERLING (EUTROPHIC)
COUNTY - LAFAYETTE
STORET NO. - 0508 WORKING PAPER NO. 486. NTIS ACCESSION NO. PB-268 395/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1023.00	28.33	2.1	10.340	67.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	64.	1.1	0.054	0.020	0.120	0.665

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
13.4	3.2	(3/25/74) N (6/ 3/74) P AND N (10/17/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/25/74 GENERA	COUNT	6/ 3/74 GENERA	COUNT	10/17/74 GENERA	COUNT
MELOSIRA	1843	MELOSIRA	491	MELOSIRA	1371
CRYPTOMONAS	282	DACTYLOCOCCOPSIS	338	CRYPTOMONAS	190
DACTYLOCOCCOPSIS	154	CHROOMONAS	215	OOCYSTIS	152
CHROOMONAS	128	CRYPTOMONAS	31	DACTYLOCOCCOPSIS	76
ANKISTRODESMUS	51	ANACYSTIS(MICROCYSTIS)	31	DICTYOSPHAERIUM	38
OTHER	435	OTHER	60	OTHER	153
TOTAL	2893	TOTAL	1166	TOTAL	1980

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2615.	**********	**********	21630.	24245.
NITROGEN	7840.	**********	**********	300735.	308575.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	16095.	34.	0.86
NITROGEN	233290.	24.	10.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HODCAU CREEK	7.960	787.4	0.091	0.964	26.	305.
WALKER CREEK	0.470	46.9	0.096	0.803	5.	145.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
HEIRS CREEK	0.099	1.067

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - GREER'S FERRY RESERVOIR (MESOTROPHIC)
COUNTY - VAN BUREN, CLEBURNE
STORET NO. - 0516 WORKING PAPER NO. 487. NTIS ACCESSION NO. PB-266 777/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	2986.30	163.90	21.4	49.660	820.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
18.	38.	3.3	0.012	0.004	0.140	0.320

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
3.8	0.1 - 0.2 (2)	(3/27/74) N	(6/ 6/74) P	(9/ 3/74) P	(10/16/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/27/74 GENERA	COUNT	6/ 6/74 GENERA	COUNT	9/ 3/74 GENERA	COUNT	10/16/74 GENERA	COUNT
CHROOMONAS	500	TABELLARIA	1579	LYNGBYA	3098	LYNGBYA	678
MELOSIRA	500	MELOSIRA	486	CHROOMONAS	313	TABELLARIA	601
CRYPTOMONAS	350	CHROOMONAS	202	ANACYSTIS(MICROCYSTIS)	219	MELOSIRA	290
SKELETONEMA	325	CRYPTOMONAS	202	CRYPTOMONAS	188	DACTYLOCOCCOPSIS	58
FLAGELLATES	225	FRAGILARIA	121	FLAGELLATES	125	CENTRIC DIATOM	39
OTHER	573	OTHER	326	OTHER	469	OTHER	136
TOTAL	2473	TOTAL	2916	TOTAL	4412	TOTAL	1802

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	4020.	**********	25.	35355.	39400.
NITROGEN	21285.	**********	975.	904950.	927210.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	20525.	48.	0.24
NITROGEN	1227040.	LOSS	5.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MIDDLE FORK LITTLE RED R	13.540	800.3	0.030	0.526	15.	292.
SOUTH FORK LITTLE RED R.	6.320	375.5	0.026	0.628	13.	353.
ARCHEY CREEK	4.990	305.6	0.019	0.385	9.	206.
PEE DEE CREEK	1.370	85.0	0.021	0.453	10.	238.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
BEECH CREEK	0.023	0.749
UNNAMED STREAM #1 *	0.330	4.302

* BELOW POINT SOURCE.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - GRAND LAKE (EUTROPHIC)
COUNTY - CHICOT
STORET NO. - 0509 WORKING PAPER NO. 488. NTIS ACCESSION NO. PB-266 788/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	5.67	2.1	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
95.	160.	0.5	0.101	0.021	0.090	1.220

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
62.9	3.8	(3/26/74) N	(6/ 4/74) N	(10/16/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/26/74 GENERA	COUNT	6/ 4/74 GENERA	COUNT	10/16/74 GENERA	COUNT
NITZSCHIA	4635	DACTYLOCOCCOPSIS	52408	DACTYLOCOCCOPSIS	3523
STEPHANODISCUS	3813	STEPHANODISCUS	23206	OSCILLATORIA	3030
FLAGELLATES	2467	MERISMOPEDIA	16165	CENTRIC DIATOM	2924
CHLAMYDOMONAS	2093	ANACYSTIS(MICROCYSTIS)	11472	ANACYSTIS(MICROCYSTIS)	2537
MELOSIRA	1794	LYNGBYA	10429	MERISMOPEDIA	2008
OTHER	8298	OTHER	39112	OTHER	3171
TOTAL	23100	TOTAL	152792	TOTAL	17193

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - MILLWOOD RESERVOIR (EUTROPHIC)
COUNTY - HEMPSTEAD, HOWARD, LITTLE RIVER, SEVIER
STORET NO. - 0511 WORKING PAPER NO. 489. NTIS ACCESSION NO. PB-266 789/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	10733.00	118.17	2.2	165.290	18.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
20.	66.	0.8	0.040	0.008	0.120	0.490

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(3/25/74) N	(6/ 3/74) P	(10/17/74) N
15.0	0.1			

SUMMARY OF PHYTOPLANKTON DATA

3/25/74 GENERA	COUNT	6/ 3/74 GENERA	COUNT	10/17/74 GENERA	COUNT
CHROOMONAS	698	MELOSIRA	2822	CENTRIC DIATOM	438
MELOSIRA	698	ANABAENA	541	MELOSIRA	341
CARTERIA	220	DINOBRYON	502	CHROOMONAS	195
CRYPTOMONAS	220	FLAGELLATES	464	DACTYLOCOCCOPSIS	97
FLAGELLATES	220	DACTYLOCOCCOPSIS	425	CRYPTOMONAS	49
OTHER	884	OTHER	2551	OTHER	146
TOTAL	2940	TOTAL	7305	TOTAL	1266

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	17590.	**********	**********	244785.	262375.
NITROGEN	68420.	**********	**********	3539935.	3608355.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	279845.	LOSS	2.22
NITROGEN	2406545.	33.	30.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LITTLE RIVER	107.860	6925.7	0.049	0.670	23.	336.
FLAT CREEK	2.330	159.5	0.061	0.817	23.	385.
COSSATOT RIVER	16.850	1129.2	0.035	0.481	16.	233.
SALINE RIVER	9.880	673.4	0.067	0.547	29.	264.
BLUE BAYOU	0.910	60.6	0.046	0.493	19.	241.
DILLARD CREEK	0.670	44.5	0.064	0.825	29.	408.
COLEMAN CREEK	0.700	43.5	0.046	0.703	20.	372.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
CYPRESS CREEK	0.027	0.550
HURRICANE CREEK	0.034	0.598

CANEY CREEK	0.056	0.462
COOL CREEK	0.031	0.809
BRIDGE CREEK	0.047	0.542
SAND CREEK	0.055	0.559
ROCK CREEK	0.043	0.649
MINE CREEK *	0.144	1.215

* BELOW POINT SOURCE.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - NIMROD LAKE (MESO-EUTROPHIC)
COUNTY - PERRY, YELL
STORET NO. - 0512

WORKING PAPER NO. 490, NTIS ACCESSION NO. PB-266 779/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1771.60	14.57	2.5	24.410	17.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
13.	42.	0.8	0.039	0.006	0.160	0.435

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
15.8	1.0 - 2.3 (2)	(3/27/74) N	(6/ 7/74) P	(10/18/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/27/74 GENERA	COUNT	6/ 7/74 GENERA	COUNT	10/18/74 GENERA	COUNT
FLAGELLATES	1933	MELOSIRA	493	MELOSIRA	1417
ANKISTRODESMUS	424	CHROOMONAS	99	ANACYSTIS(MICROCYSTIS)	486
CRYPTOMONAS	424	CRYPTOMONAS	49	DACTYLOCOCCOPSIS	445
CENTRIC DIATOM	94	CYCLOTELLA	49	CRYPTOMONAS	243
OSCILLATORIA	94	DACTYLOCOCCOPSIS	49	CYCLOTELLA	162
OTHER	237	OTHER	222	OTHER	851
TOTAL	3206	TOTAL	961	TOTAL	3604

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	15.	15965.	15980.
NITROGEN	**********	**********	615.	541240.	541855.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	30565.	LOSS	1.10
NITROGEN	460910.	15.	37.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
FOURCHE LA FAVE RIVER	17.590	1271.7	0.026	0.588	10.	328.
BRUSH CREEK	0.680	51.0	0.016	0.467	6.	194.
HOGAN CREEK	0.360	27.2	0.017	0.606	7.	255.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
PORTER CREEK	0.040	0.684
WEST GAFFORD CREEK	0.017	0.573
EAST GAFFORD CREEK	0.025	0.419

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN ARKANSAS

NAME - NORFOLK LAKE (MESOTROPHIC)
COUNTY - BAXTER, FULTON, ARK OZARK, MO
STORET NO. - 0513 WORKING PAPER NO. 491. NTIS ACCESSION NO. PB-268 397/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	4682.70	89.03	17.3	50.200	355.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
158.	256.	3.6	0.015	0.005	0.320	0.510

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
		(4/ 5/74)	(6/19/74)	(9/ 3/74)	(10/10/74)
3.4	0.1 - 0.5 (3)	P	P	P	P

SUMMARY OF PHYTOPLANKTON DATA

4/ 5/74 GENERA	COUNT	6/19/74 GENERA	COUNT	9/ 3/74 GENERA	COUNT	10/10/74 GENERA	COUNT
CHROOMONAS	556	FRAGILARIA	645	FRAGILARIA	805	ANACYSTIS(MICROCYSTIS)	603
MELOSIRA	408	DINOBRYON	609	NITZSCHIA	689	FLAGELLATES	362
STIPITOCOCCUS	148	CRYPTOMONAS	179	ANACYSTIS(MICROCYSTIS)	632	CRYPTOMONAS	322
CENTRIC DIATOM	74	CERATIUM	72	ACHNANTHES	402	DACTYLOCOCCOPSIS	241
CRYPTOMONAS	74	CYCLOTELLA	72	MELOSIRA	345	MOUGEOTIA	201
OTHER	149	OTHER	214	OTHER	1323	OTHER	1168
TOTAL	1409	TOTAL	1791	TOTAL	4196	TOTAL	2897

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	820.	**********	30.	20955.	21805.
NITROGEN	2465.	**********	1130.	1660745.	1664340.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	27840.	LOSS	0.24
NITROGEN	1442945.	13.	18.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
NORTH FORK WHITE RIVER	19.610	1460.8	0.015	1.104	6.	482.
HUTCH CREEK	0.230	22.8	0.012	0.670	4.	229.
PIGEON CREEK	0.240	23.1	0.012	0.656	4.	228.
EAST PIGEON CREEK	0.260	24.9	0.010	0.716	3.	230.
LICK CREEK	1.520	255.9	0.016	0.784	3.*	262.*
PINE CREEK (CANEY CREEK)	0.780	106.4	0.011	0.789	2.	226.
BRYANT CREEK	14.180	1349.4	0.011	0.796	4.	267.
BRIDGES CREEK	0.550	75.1	0.011	0.860	2.	214.
BARREN CREEK	0.280	26.9	0.013	1.010	4.	340.
BENNETTS BAYOU	1.830	174.8	0.010	1.062	3.	366.
BENNETTS RIVER	1.800	176.6	0.014	0.859	4.	371.
BIG CREEK	1.420	136.2	0.013	0.813	3.	277.
BRUSHY CREEK	0.340	33.2	0.011	0.889	3.	302.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
LITTLE PIGEON CREEK	0.019	1.430
WALKER CREEK	0.016	0.900

* ESTIMATED

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - LAKE ANQUARI (EUTROPHIC)
COUNTY - WARREN
STORET NO. - 1901 WORKING PAPER NO. 494. NTIS ACCESSION NO. PB-258 249/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	12.80	0.53	3.0	0.070	263.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
104.	187.	0.8	0.062	0.009	0.335	1.120

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
8.6	9.0	(4/17/74) P (7/ 2/74) NO DATA (9/25/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/17/74 GENERA	COUNT	7/ 2/74 GENERA	COUNT	9/25/74 GENERA	COUNT
SYNEDRA	475	TRACHELOMONAS	627	OSCILLATORIA	768
CENTRIC DIATOM	277	ANABAENA	575	MELOSIRA	384
ASTERIONELLA	198	CENTRIC DIATOM	314	APHANIZOMENON	154
APHANIZOMENON	158	ANACYSTIS(MICROCYSTIS)	105	TRACHELOMONAS	115
NITZSCHIA	119	SCHROEDERIA	105	ANABAENA	77
OTHER	118	OTHER	208	OTHER	153
TOTAL	1345	TOTAL	1934	TOTAL	1651

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	10.	530.	540.
NITROGEN	**********	**********	390.	10965.	11355.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	180.	67.	1.02
NITROGEN	4290.	62.	21.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM	0.030	5.8	0.162	4.490	42.	845.

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN IOWA

NAME - BIG CREEK RESERVOIR (EUTHOPHIC)
COUNTY - POLK
STORET NO. - 1902 WORKING PAPER NO. 495. NTIS ACCESSION NO. PB-258 248/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	203.60	3.44	6.7	0.990	269.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
274.	448.	1.6	0.046	0.011	6.465	7.185

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
16.9	0.1	(4/18/74) P (7/ 9/74) NO DATA (9/25/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/18/74 GENERA	COUNT	7/ 9/74 GENERA	COUNT	9/25/74 GENERA	COUNT
STEPHANODISCUS	14887	ASTERIONELLA	595	MELOSIRA	1167
FLAGELLATES	665	STEPHANODISCUS	457	FRAGILARIA	257
ANKISTRODESMUS	250	FLAGELLATES	46	STEPHANODISCUS	40
CHLAMYDOMONAS	208			APHANIZOMENON	40
GYMNODINIUM	166			APHANOTHECE	40
OTHER	416	OTHER	0	OTHER	117
TOTAL	16592	TOTAL	1098	TOTAL	1661

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	7800.	7800.
NITHOGEN	**********	**********	**********	369210.	369210.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2055.	74.	2.27
NITHOGEN	201830.	45.	107.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BIG CREEK	0.510	104.6	0.162	7.890	33.	1780.
LITTLE CREEK	0.260	53.9	0.245	8.698	53.	1949.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - BLACK HAWK LAKE (EUTROPHIC)
COUNTY - SAC
STORET NO. - 1903 WORKING PAPER NO. 496. NTIS ACCESSION NO. PB-258 247/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	60.30	3.72	1.7	0.270	271.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
147.	322.	0.3	0.185	0.020	0.130	1.715

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
49.7	15.6	(4/19/74) P (7/ 3/74) NO DATA (9/25/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/19/74 GENERA	COUNT	7/ 3/74 GENERA	COUNT	9/25/74 GENERA	COUNT
NITZSCHIA	20657	APHANIZOMENON	9323	MERISMOPEDIA	28092
STEPHANODISCUS	16611	SPHAEROCYSTIS	6447	OSCILLATORIA	3904
FLAGELLATES	9796	OOCYSTIS	5612	FLAGELLATES	3140
CRYPTOMONAS	3194	CRUCIGENIA	1160	APHANIZOMENON	2885
ANKISTRODESMUS	2875	STEPHANODISCUS	835	STEPHANODISCUS	2631
OTHER	5964	OTHER	1855	OTHER	13665
TOTAL	59097	TOTAL	25232	TOTAL	54317

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	25.	2010.	2035.
NITROGEN	**********	**********	905.	79585.	80490.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1635.	20.	0.55
NITROGEN	23995.	70.	21.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM #1	0.210	47.1	0.281	7.231	34.	1335.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - CLEAR LAKE (EUTROPHIC)
COUNTY - CERRO GORDO
STORET NO. - 1904 WORKING PAPER NO. 447. NTIS ACCESSION NO. PB-259 185/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	14.74	3.0	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
155.	272.	0.9	0.059	0.010	0.070	1.390

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
17.4	2.8	(6/18/74) P (7/ 3/74) NO DATA (9/23/74) N

SUMMARY OF PHYTOPLANKTON DATA

6/18/74 GENERA	COUNT	7/ 3/74 GENERA	COUNT	9/23/74 GENERA	COUNT
DINOBRYON	5340	MELOSIRA	5919	ANACYSTIS(MICROCYSTIS)	8662
MELOSIRA	3432	ANACYSTIS(MICROCYSTIS)	3277	APHANOCAPSA	3948
FRAGILARIA	2091	COELOSPHAERIUM	1809	FRAGILARIA	471
ASTERIONELLA	884	OOCYSTIS	536	BLUE-GREEN FILAMENT	236
FLAGELLATES	793	FRAGILARIA	530	CRYPTOMONAS	236
OTHER	2649	OTHER	2242	OTHER	2416
TOTAL	15189	TOTAL	14119	TOTAL	15989

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - LOST ISLAND LAKE (EUTROPHIC)
COUNTY - CLAY,PALO ALTO
STORET NO. - 1906 WORKING PAPER NO. 499. NTIS ACCESSION NO. PB-259 171/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	9.10	3.0	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
178.	303.	2.0	0.146	0.021	0.005	2.665

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
36.1	**********	(6/22/74) P (7/ 9/74) NO DATA (9/23/74) N

SUMMARY OF PHYTOPLANKTON DATA

6/24/74 GENERA	COUNT	9/23/74 GENERA	COUNT
FLAGELLATES	1845	APHANOCAPSA	7769
CRYPTOMONAS	865	LYNGBYA	7684
FRAGILARIA	807	MELOSIRA	5605
ANKISTRODESMUS	692	NITZSCHIA	5122
DINOBRYON	432	MERISMOPEDIA	3927
OTHER	4264	OTHER	8707
TOTAL	8905	TOTAL	39814

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - LAKE MACBRIDE (EUTHOPHIC)
COUNTY - JOHNSON
STORET NO. - 1907 WORKING PAPER NO. 500. NTIS ACCESSION NO. PB-258 295/AH

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
Impoundment	69.90	3.84	7.3	0.410	2.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
125.	253.	1.1	0.061	0.010	2.035	2.595

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
17.1	**********	(4/18/74) P (7/ 3/74) NO DATA (9/24/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/18/74 GENERA	COUNT	7/ 3/74 GENERA	COUNT	9/24/74 GENERA	COUNT
CENTRIC DIATOM	8889	MELOSIRA	4275	MELOSIRA	5076
FLAGELLATES	3081	OOCYSTIS	792	FLAGELLATES	1232
CRYPTOMONAS	652	FLAGELLATES	317	PENNATE DIATOMS	859
APHANIZOMENON	593	CRYPTOMONAS	198	CRYPTOMONAS	672
STEPHANODISCUS	474	LEPOCINCLIS	119	SYNEDRA	635
OTHER	118	OTHER	315	OTHER	1268
TOTAL	13807	TOTAL	6016	TOTAL	9742

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1075.	**********	**********	1510.	2585.
NITROGEN	3230.	**********	**********	61650.	64880.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	725.	72.	0.67
NITROGEN	28590.	56.	16.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MILL CREEK R1	0.130	21.5	0.923	7.155	22.	870.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - PRAIRIE ROSE LAKE (EUTROPHIC)
COUNTY - SHELBY
STORET NO. - 1908 WORKING PAPER NO. 501. NTIS ACCESSION NO. PB-259 172/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	20.40	0.88	3.3	0.080	1.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
166.	287.	0.9	0.056	0.010	0.210	1.260

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
17.4	**********	(4/17/74) P (7/ 2/74) NO DATA (9/25/74) P AND N

SUMMARY OF PHYTOPLANKTON DATA

4/17/74 GENERA	COUNT	7/ 2/74 GENERA	COUNT	9/25/74 GENERA	COUNT
ASTERIONELLA	7006	MELOSIRA	522	CRYPTOMONAS	766
CENTRIC DIATOM	2158	ANABAENA	494	CLOSTERIOPSIS	681
FLAGELLATES	1487	APHANIZOMENON	385	FRAGILARIA	383
DINOBRYON	835	FRAGILARIA	275	OSCILLATORIA	255
ANKISTRODESMUS	435	CRYPTOMONAS	220	STEPHANODISCUS	85
OTHER	1365	OTHER	521	OTHER	42
TOTAL	13286	TOTAL	2417	TOTAL	2212

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	635.	635.
NITROGEN	**********	**********	**********	14090.	14090.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	170.	73.	0.72
NITROGEN	4705.	67.	16.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM B1	0.020	5.7	0.320	4.970	32.	674.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - RATHBUN RESERVOIR (EUTROPHIC)
COUNTY - APPANOOSE,LUCAS,MONROE,WAYNE
STORET NO. - 1909 WORKING PAPER NO. 502. NTIS ACCESSION NO. PB-265 610/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	1421.90	44.52	6.7	9.050	1.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
96.	232.	0.6	0.071	0.008	1.170	1.765

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
12.0	1.1 - 6.8 (4)	(4/19/74) P (7/ 3/74) NO DATA (9/24/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/19/74 GENERA	COUNT	7/ 3/74 GENERA	COUNT	9/24/74 GENERA	COUNT
STEPHANODISCUS	30898	MELOSIRA	308	MELOSIRA	818
FLAGELLATES	958	FLAGELLATES	213	FLAGELLATES	570
ANKISTRODESMUS	766	CRYPTOMONAS	142	CRYPTOMONAS	248
MELOSIRA	479	KIRCHNERIELLA	95	STEPHANODISCUS	198
TRACHELOMONAS	287	STEPHANODISCUS	71	RAPHIDIOPSIS	124
OTHER	432	OTHER	216	OTHER	719
TOTAL	33820	TOTAL	1045	TOTAL	2677

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	9535.	**********	10.	99310.	108855.
NITROGEN	23785.	**********	425.	874960.	899170.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	19290.	82.	2.45
NITROGEN	546965.	39.	20.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
S.F. CHARITON RIVER	2.770	435.1	0.213	1.870	36.	402.
CHARITON RIVER	3.000	471.4	0.630	3.519	105.	788.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - RED ROCK RESERVOIR (EUTROPHIC)
COUNTY - MARION
STORET NO. - 1910 WORKING PAPER NO. 503. NTIS ACCESSION NO. PB-261 826/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	31916.60	36.22	3.0	124.140	10.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
254.	572.	0.7	0.180	0.104	1.880	2.860

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
14.7	2.8	(4/18/74) P (7/ 8/74) NO DATA (9/24/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/18/74 GENERA	COUNT	7/ 8/74 GENERA	COUNT	9/24/74 GENERA	COUNT
CENTRIC DIATOM	9795	NITZSCHIA	454	CYCLOTELLA	3213
STEPHANODISCUS	1245	OSCILLATORIA	454	OSCILLATORIA	771
SYNEDRA	974	ACTINASTRUM	363	MELOSIRA	707
CRYPTOMONAS	487	STEPHANODISCUS	318	FLAGELLATES	321
ANKISTRODESMUS	325	COELOSPHAERIUM	273	MERISMOPEDIA	193
OTHER	648	OTHER	2044	OTHER	1028
TOTAL	13474	TOTAL	3906	TOTAL	6233

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	427160.	**********	**********	2070570.	2497730.
NITROGEN	1159805.	**********	**********	28901345.	30061150.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	978530.	61.	68.96
NITROGEN	22386480.	26.	830.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
DES MOINES RIVER A3	114.460	30186.4	0.402	6.615	65.	909.
WHITE BREAST CREEK	5.510	984.2	0.416	3.431	78.	684.
CALHOUN CREEK	0.330	58.8	0.498	7.796	68.	1560.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
COMPETINE CREEK *	4.244	9.648
WALNUT CREEK	0.300	7.383
HAWK RUN	0.173	4.193
PRAIRIE CREEK	0.391	6.889
HUTCHER CREEK	0.185	3.625

* BELOW POINT SOURCE.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - ROCK CREEK LAKE (EUTROPHIC)
COUNTY - JASPER
STORET NO. - 1911 WORKING PAPER NO. 504. NTIS ACCESSION NO. PB-258 289/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	107.20	2.60	2.7	0.570	143.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
169.	333.	0.5	0.065	0.007	1.400	2.430

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
18.4	0.2 - 5.0 (2)	(4/19/74) P (7/ 3/74) NO DATA (9/24/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/19/74 GENERA	COUNT	7/ 3/74 GENERA	COUNT	9/24/74 GENERA	COUNT
CYCLOTELLA	16387	CRYPTOMONAS	502	APHANIZOMENON	2759
FLAGELLATES	712	CENTRIC DIATOM	413	CRYPTOMONAS	690
CRYPTOMONAS	574	NITZSCHIA	325	FLAGELLATES	439
CHLAMYDOMONAS	122	MELOSIRA	59	CHLAMYDOMONAS	313
APHANIZOMENON	52	LEPOCINCLIS	59	CRUCIGENIA	125
OTHER	243	OTHER	118	OTHER	125
TOTAL	18090	TOTAL	1476	TOTAL	4451

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	8125.	8125.
NITROGEN	••••••••••	••••••••••	••••••••••	92420.	92420.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1450.	82.	3.12
NITROGEN	70375.	24.	35.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ROCK CREEK	0.360	67.9	0.243	4.749	77.	857.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - SILVER LAKE (EUTROPHIC)
COUNTY - WORTH
STORET NO. - 1912 WORKING PAPER NO. 505. NTIS ACCESSION NO. PB-259 160/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	8.20	1.29	1.2	0.040	1.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
110.	159.	0.4	0.193	0.034	0.565	4.390

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
95.3	23.6	(4/18/74) P (7/ 3/74) NO DATA (9/23/74) N

SUMMARY OF PHYTOPLANKTON DATA

7/ 3/74 GENERA	COUNT	9/23/74 GENERA	COUNT
LYNGBYA	47518	LYNGBYA	184949
APHANIZOMENON	10914	APHANIZOMENON	10192
MELOSIRA	5022	ANACYSTIS(MICROCYSTIS)	8281
SYNEDRA	4443	SCENEDESMUS	2549
SCENEDESMUS	3477	APHANOCAPSA	1274
OTHER	11299	OTHER	4672
TOTAL	82673	TOTAL	211917

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	315.	315.
NITROGEN	**********	**********	**********	4990.	4990.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	200.	37.	0.24
NITROGEN	5495.	LOSS	3.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SILVER LAKE MARSH OUTLET	0.010	2.4	0.293	3.457	42.	521.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - SPIRIT LAKE (EUTROPHIC)
COUNTY - DICKINSON
STORET NO. - 1913 WORKING PAPER NO. 506. NTIS ACCESSION NO. PB-259 124/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	23.00	5.5	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
184.	368.	2.0	0.041	0.007	0.090	1.215

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
12.6	0.1	(4/23/74) P AND N (7/ 9/74) NO DATA (9/23/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/23/74 GENERA	COUNT	7/ 9/74 GENERA	COUNT	9/23/74 GENERA	COUNT
FLAGELLATES	912	APHANOCAPSA	1569	APHANOTHECE	1182
DINOBRYON	240	APHANIZOMENON	262	ANABAENA	734
CRYPTOMONAS	144	SCHROEDERIA	262	APHANIZOMENON	326
APHANOTHECE	96	ANABAENA	232	COELOSPHAERIUM	285
DINOFLAGELLATES	48	CRYPTOMONAS	145	OSCILLATORIA	245
OTHER	97	OTHER	174	OTHER	937
TOTAL	1537	TOTAL	2644	TOTAL	3709

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - VIKING LAKE (EUTROPHIC)
COUNTY - MONTGOMERY
STORET NO. - 1914 WORKING PAPER NO. 507. NTIS ACCESSION NO. PB-259 166/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	10.30	0.61	5.8	0.070	1.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
120.	219.	1.0	0.075	0.017	0.130	1.070

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
26.0	**********	(4/17/74) N (7/ 2/74) NO DATA (9/25/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/17/74 GENERA	COUNT	7/ 2/74 GENERA	COUNT	9/25/74 GENERA	COUNT
ASTERIONELLA	49981	FRAGILARIA	1719	COELOSPHAERIUM	1684
APHANIZOMENON	3617	ANABAENA	700	FLAGELLATES	1500
FLAGELLATES	767	APHANIZOMENON	641	APHANIZOMENON	398
DINOBRYON	329	CRYPTOMONAS	262	ANACYSTIS(MICROCYSTIS)	184
CRYPTOMONAS	219	SCHROEDERIA	233	ANABAENA	183
OTHER	110	OTHER	389	OTHER	306
TOTAL	55023	TOTAL	3944	TOTAL	4255

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	300.	300.
NITROGEN	**********	**********	**********	4395.	4395.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	170.	43.	0.49
NITROGEN	2785.	37.	7.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED CREEK H1	0.010	1.0	0.204	1.940	30.	385.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED CREEK C1	0.127	1.513

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN IOWA

NAME - WEST OKOBOJI LAKE (EUTROPHIC)
COUNTY - DICKINSON
STORET NO. - 1915 WORKING PAPER NO. 508. NTIS ACCESSION NO. PB-260 508/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	14.93	13.7	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
219.	386.	3.0	0.046	0.017	0.060	0.925

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
7.7	0.1 - 3.8 (2)	(4/22/74) P (7/ 9/74) NO DATA (9/23/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/22/74 GENERA	COUNT	7/ 9/74 GENERA	COUNT	9/23/74 GENERA	COUNT
CYCLOTELLA	1395	FLAGELLATES	642	OOCYSTIS	164
FRAGILARIA	930	APHANOCAPSA	471	SPHAEROCYSTIS	144
FLAGELLATES	465	APHANIZOMENON	285	ANACYSTIS(MICROCYSTIS)	144
MELOSIRA	62	FRAGILARIA	157	FLAGELLATES	123
PERIDINIUM	31	SCHROEDERIA	71	MELOSIRA	82
OTHER	155	OTHER	271	OTHER	205
TOTAL	3038	TOTAL	1897	TOTAL	862

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - CEDAR BLUFF RESERVOIR (MESOTROPHIC)
COUNTY - TREGO
STORET NO. - 2001 WORKING PAPER NO. 511. NTIS ACCESSION NO. PB-269 538/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	14322.70	26.84	8.5	2.700	4.3

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
119.	965.	1.7	0.017	0.004	0.055	0.535

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
4.2	0.1	(4/15/74) P (6/26/74) NO DATA (10/ 1/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/15/74		6/26/74		10/ 1/74	
GENERA	COUNT	GENERA	COUNT	GENERA	COUNT
SYNEDRA	312	CHROOMONAS	437	CHROOMONAS	1041
CYCLOTELLA	69	CRYPTOMONAS	38	DACTYLOCOCCOPSIS	337
CRYPTOMONAS	35	CARTERIA	19	CRYPTOMONAS	123
OOCYSTIS	35	DINOBRYON	19	OOCYSTIS	123
SCENEDESMUS	35	STEPHANODISCUS	19	SCENEDESMUS	123
OTHER	0	OTHER	0	OTHER	366
TOTAL	486	TOTAL	532	TOTAL	2113

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	5.	4430.	4435.
NITROGEN	**********	**********	205.	157540.	157745.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2090.	53.	0.17
NITROGEN	73875.	53.	5.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SMOKY HILL RIVER	2.100	13519.8	0.843	1.397	0.2	7.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
PAGE CREEK	0.058	1.851

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN KANSAS

NAME - COUNCIL GROVE RESERVOIR (EUTHOPHIC)
COUNTY - MORRIS
STORET NO. - 2002

WORKING PAPER NO. 512. NTIS ACCESSION NO. PB-269 844/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	647.50	13.27	3.9	3.224	218.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
155.	282.	0.4	0.069	0.028	0.830	1.245

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
9.8	5.1 - 9.6 (2)	(4/11/74) P (6/25/74) NO DATA (10/ 2/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/11/74 GENERA	COUNT	6/25/74 GENERA	COUNT	10/ 2/74 GENERA	COUNT
ANKISTRODESMUS	1140	CHROOMONAS	527	CYCLOTELLA	1583
CHROOMONAS	1020	MELOSIRA	176	CHROOMONAS	762
STEPHANODISCUS	900	STEPHANODISCUS	70	STEPHANODISCUS	293
MELOSIRA	330	CLOSTERIUM	35	ANKISTRODESMUS	59
CRYPTOMONAS	270	SKELETONEMA	35	CRYPTOMONAS	59
OTHER	331	OTHER	36	OTHER	59
TOTAL	3991	TOTAL	879	TOTAL	2815

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	585.	**********	**********	26885.	27470.
NITROGEN	1760.	**********	**********	449340.	451100.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	9010.	67.	2.07
NITROGEN	165745.	63.	34.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
NEOSHO RIVER	0.900	192.7	0.345	3.646	60.	697.
SHORT CREEK	0.129	26.2	0.126	2.479	41.	878.
GILMORE CREEK	0.145	29.8	0.062	3.106	6.	476.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
LAIHOS CREEK	0.146	2.654
MIDDLE CREEK	0.192	2.951
HAUN CREEK	0.086	2.520
WEST FORK NEOSHO RIVER	0.158	2.690

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - ELK CITY RESERVOIR (EUTROPHIC)
COUNTY - MONTGOMERY
STORET NO. - 2003 WORKING PAPER NO. 513. NTIS ACCESSION NO. PB-269 539/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1642.10	17.81	2.4	11.460	45.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC. (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
123.	269.	0.2	0.030	0.003	0.590	0.870

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
3.2	6.8	(4/10/74) P (6/24/74) NO DATA (10/ 3/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/10/74 GENERA	COUNT	6/24/74 GENERA	COUNT	10/ 3/74 GENERA	COUNT
CENTRIC DIATOM	664	PHORMIDIUM	436	CHROOMONAS	129
CHROOMONAS	498	CENTRIC DIATOM	275	APHANIZOMENON	78
MESOSTIGMA	498	PTEROMONAS	275	CRYPTOMONAS	78
CHYPTOMONAS	373	CHROOMONAS	229	CYCLOTELLA	26
GYMNODINIUM	249	TRACHELOMONAS	206	SCENEDESMUS	26
OTHER	580	OTHER	849	OTHER	0
TOTAL	2862	TOTAL	2270	TOTAL	337

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2410.	**********	**********	37280.	39690.
NITROGEN	7230.	**********	**********	546230.	553460.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	21940.	45.	2.23
NITROGEN	405470.	27.	31.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ELK RIVER	6.920	1051.5	0.064	1.184	20.	286.
DUCK CREEK	1.180	163.4	0.132	2.975	30.	473.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
SALT CREEK	0.106	1.404

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - FALL RIVER RESERVOIR (EUTROPHIC)
COUNTY - GREENWOOD
STORET NO. - 2004 WORKING PAPER NO. 514. NTIS ACCESSION NO. PB-269 836/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1515.10	10.52	3.0	10.270	40.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
137.	383.	0.3	0.053	0.016	0.470	0.650

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
7.7	0.4 - 5.5 (2)	(6/10/74) P (6/24/74) NO DATA (10/ 2/74) P

SUMMARY OF PHYTOPLANKTON DATA

6/10/74 GENERA	COUNT	6/24/74 GENERA	COUNT	10/ 2/74 GENERA	COUNT
ASTERIONELLA	211	CRYPTOMONAS	1202	CHROOMONAS	550
CRYPTOMONAS	210	CHROOMONAS	791	MELOSIRA	220
CHROOMONAS	158	STEPHANODISCUS	791	CLOSTERIUM	44
MELOSIRA	105	SYNEDRA	63	NITZSCHIA	22
STEPHANODISCUS	105	ANABAENA	32	STEPHANODISCUS	22
OTHER	106	OTHER	32	OTHER	21
TOTAL	895	TOTAL	2911	TOTAL	879

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	4120.	**********	5.	15250.	19375.
NITROGEN	12350.	**********	215.	489805.	502370.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	20695.	LOSS	1.84
NITROGEN	542230.	LOSS	47.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
FALL RIVER	5.610	795.1	0.087	1.983	9.	307.
OTTER CREEK	2.490	336.1	0.053	1.424	11.	330.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME = JOHN REDMOND RESERVOIR (EUTROPHIC)
COUNTY = COFFEY, LYON
STORET NO. = 2005

WORKING PAPER NO. 515. NTIS ACCESSION NO. PB-269 845/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	7888.00	38.94	2.9	40.390	23.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
159.	333.	0.2	0.118	0.066	1.250	1.810

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/11/74) P	(6/23/74) P	(10/ 1/74) P
9.5	12.8			

SUMMARY OF PHYTOPLANKTON DATA

6/11/74 GENERA	COUNT	6/23/74 GENERA	COUNT	10/ 1/74 GENERA	COUNT
STEPHANODISCUS	1143	MELOSIRA	379	STEPHANODISCUS	167
CENTRIC DIATOM	842	FLAGELLATES	169	CHROOMONAS	139
CHROOMONAS	421	STEPHANODISCUS	126	GLOEOCYSTIS	139
ACTINASTRUM	241	CYCLOTELLA	84	CRYPTOMONAS	83
MELOSIRA	180	OSCILLATORIA	84	PENNATE DIATOMS	56
OTHER	542	OTHER	338	OTHER	0
TOTAL	3369	TOTAL	1180	TOTAL	584

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	84550.	••••••••••	••••••••••	265309.	349859.
NITROGEN	229025.	••••••••••	••••••••••	3693215.	3922240.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	199875.	43.	9.20
NITROGEN	2480455.	37.	103.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
NEOSHO RIVER	9.850	2007.2	0.217	2.650	39.	415.
EAGLE CREEK	0.960	142.2	0.155	2.711	25.	773.
COTTONWOOD RIVER	20.650	4843.3	0.390	3.576	37.	437.
BADGEN CREEK	0.500	72.0	0.183	2.398	52.	641.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
OTTEN CREEK	0.076	1.620

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - KANOPOLIS RESERVOIR (EUTROPHIC)
COUNTY - ELLSWORTH
STORET NO. - 2006 WORKING PAPER NO. 516. NTIS ACCESSION NO. PB-269 838/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	20349.60	14.37	4.5	9.622	120.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
149.	1068.	0.3	0.056	0.011	0.640	1.210

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(4/12/74) P	(6/27/74) P	(10/ 1/74) P
16.6	0.1 - 0.8 (2)			

SUMMARY OF PHYTOPLANKTON DATA

4/12/74 GENERA	COUNT	6/27/74 GENERA	COUNT	10/ 1/74 GENERA	COUNT
DACTYLOCOCCOPSIS	2563	CHLAMYDOMONAS	3393	FLAGELLATES	1410
CENTRIC DIATOM	1955	CHROOMONAS	664	STEPHANODISCUS	1234
SKELETONEMA	1260	ZOOSPORES	553	CHROOMONAS	529
CHROOMONAS	738	CYCLOTELLA	332	CRYPTOMONAS	485
CHRYSOPHYTAN CELLS	652	EUGLENA	258	SKELETONEMA	264
OTHER	1606	OTHER	1401	OTHER	440
TOTAL	8774	TOTAL	6601	TOTAL	4362

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	4865.	**********	15.	90740.	95620.
NITROGEN	15205.	**********	495.	623495.	639195.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	21020.	78.	6.65
NITROGEN	496560.	22.	44.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SMOKY HILL RIVER	8.160	19632.2	0.355	2.225	4.	29.
CLEAR CREEK	0.075	44.5	0.163	1.706	9.	91.
SAND CREEK	0.037	21.8	0.064	1.009	3.	54.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
ALUM CREEK	0.189	1.615
SPRING CREEK	0.165	3.528

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - MARION RESERVOIR (EUTROPHIC)
COUNTY - MARION
STORET NO. - 2007 WORKING PAPER NO. 517. NTIS ACCESSION NO. PB-269 840/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	518.00	24.93	4.1	2.310	2.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
126.	432.	0.4	0.052	0.010	0.430	1.180

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(4/12/74) P	(6/27/74) P	(10/ 2/74) P
12.4	5.8			

SUMMARY OF PHYTOPLANKTON DATA

4/12/74 GENERA	COUNT	6/27/74 GENERA	COUNT	10/ 2/74 GENERA	COUNT
CYCLOTELLA	30718	STEPHANODISCUS	308	CARTERIA	660
MELOSIRA	6211	MELOSIRA	308	CHROOMONAS	616
STEPHANODISCUS	1310	CHROOMONAS	166	NITZSCHIA	572
SYNEDRA	211	CRYPTOMONAS	142	STEPHANODISCUS	484
CRUCIGENIA	169	OOCYSTIS	95	CRYPTOMONAS	440
OTHER	297	OTHER	118	OTHER	1455
TOTAL	38916	TOTAL	1137	TOTAL	4227

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	970.	**********	**********	9250.	10220.
NITROGEN	2905.	**********	**********	156720.	159625.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2850.	72.	0.41
NITROGEN	52510.	67.	6.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
NORTH COTTONWOOD RIVER	0.850	246.6	0.212	2.498	19.	260.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
FRENCH CREEK	0.164	2.250
SILVER RIVER	0.089	1.428
PERRY RIVER	0.162	1.829

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - MELVERN RESERVOIR (EUTROPHIC)
COUNTY - OSAGE
STORET NO. - 2008 WORKING PAPER NO. 518. NTIS ACCESSION NO. PB-269 841/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	909.10	28.05	6.0	6.188	1.1

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
146.	377.	1.0	0.034	0.007	0.265	0.935

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(4/12/74) P	(6/25/74) P	(10/ 1/74) P
30.4	0.1			

SUMMARY OF PHYTOPLANKTON DATA

4/12/74 GENERA	COUNT	6/25/74 GENERA	COUNT	10/ 1/74 GENERA	COUNT
CENTRIC DIATOM	18106	CRYPTOMONAS	243	MELOSIRA	1399
MELOSIRA	2495	SCHROEDERIA	195	PEDIASTRUM	392
CHROOMONAS	927	CHROOMONAS	146	CENTRIC DIATOM	336
CRYPTOMONAS	530	STEPHANODISCUS	146	ANABAENA	224
ANKISTRODESMUS	221	LEPOCINCLIS	97	APHANIZOMENON	112
OTHER	485	OTHER	49	OTHER	223
TOTAL	22764	TOTAL	876	TOTAL	2686

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	310.	••••••••••	••••••••••	21775.	22085.
NITROGEN	935.	••••••••••	••••••••••	503465.	504400.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	8465.	62.	0.79
NITROGEN	355240.	30.	18.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MARAIS DES CYGNES RIVER	2.830	458.4	0.137	2.498	24.	549.
MUD CREEK	0.128	19.4	0.191	2.815	24.	502.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
COAL CREEK	0.155	2.395
MUD CREEK	0.192	2.367

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - MILFORD RESERVOIR (EUTROPHIC)
COUNTY - CLAY, GEARY
STORET NO. - 2009 WORKING PAPER NO. 519, NTIS ACCESSION NO. PB-269 856/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	64465.10	65.51	7.8	27.193	285.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
196.	645.	0.9	0.079	0.036	0.710	1.200

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
18.9	12.6	(4/11/74) P	(6/26/74) P	(10/ 3/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/11/74 GENERA	COUNT	6/26/74 GENERA	COUNT	10/ 3/74 GENERA	COUNT
STEPHANODISCUS	20759	CENTRIC DIATOM	284	STEPHANODISCUS	5182
CHROOMONAS	1801	ANACYSTIS(MICROCYSTIS)	236	CHROOMONAS	790
ANKISTRODESMUS	450	SCENEDESMUS	189	SKELETONEMA	740
CRYPTOMONAS	225	CRYPTOMONAS	142	DACTYLOCOCCOPSIS	296
NITZSCHIA	135	NITZSCHIA	142	SCENEDESMUS	197
OTHER	180	OTHER	379	OTHER	395
TOTAL	23550	TOTAL	1372	TOTAL	7600

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	14030.	**********	**********	414535.	428565.
NITROGEN	43565.	**********	**********	2316050.	2359615.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	48260.	89.	6.54
NITROGEN	1327935.	44.	36.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
REPUBLICAN RIVER	23.530	63563.8	0.382	2.494	6.	30.
FIVE CREEKS	0.570	179.7	0.141	1.931	30.	370.
MALL CREEK	0.263	54.0	0.286	4.421	39.	725.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED STREAM C-1	0.219	2.304
UNNAMED STREAM F-1	1.176	******
UNNAMED STREAM G-1	0.050	0.170

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - NORTON RESERVOIR (EUTROPHIC)
COUNTY - NORTON
STORET NO. - 2010 WORKING PAPER NO. 520. NTIS ACCESSION NO. PB-269 241/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	1771.60	8.86	5.0	1.018	1.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
216.	475.	0.6	0.122	0.036	0.110	1.220

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(4/15/74) N	(6/28/74) N	(9/30/74) N
21.4	7.6			

SUMMARY OF PHYTOPLANKTON DATA

4/15/74 GENERA	COUNT	6/28/74 GENERA	COUNT	9/30/74 GENERA	COUNT
ANKISTRODESMUS	4786	MELOSIRA	11923	MERISMOPEDIA	1837
CHROOMONAS	3817	EPIPHYTES	6248	SCENEDESMUS	695
STEPHANODISCUS	1273	CHLAMYDOMONAS	5675	ANACYSTIS(MICROCYSTIS)	645
CRYPTOMONAS	1222	CHROOMONAS	1562	CRUCIGENIA	645
CRUCIGENIA	1171	OOCYSTIS	1041	ANKISTRODESMUS	645
OTHER	2699	OTHER	2083	OTHER	3427
TOTAL	14968	TOTAL	28532	TOTAL	7894

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	285.	**********	**********	10840.	11125.
NITROGEN	850.	**********	**********	72755.	73605.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2750.	75.	1.26
NITROGEN	21220.	71.	8.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
PRAIRIE DOG CREEK	0.740	1528.1	0.355	1.833	5.	27.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
SOUTH PRAIRIE DOG CREEK	0.306	2.433

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - PERRY RESERVOIR (EUTROPHIC)
COUNTY - JEFFERSON
STORET NO. - 2011 WORKING PAPER NO. 521. NTIS ACCESSION NO. PB-269 842/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	2893.00	49.37	3.7	13.520	281.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
166.	371.	0.5	0.055	0.017	0.970	1.420

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
5.6	7.4	(4/12/74) P	(6/25/74) P	(10/ 2/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/12/74 GENERA	COUNT	6/25/74 GENERA	COUNT	10/ 2/74 GENERA	COUNT
STEPHANODISCUS	891	CRYPTOMONAS	368	CHROOMONAS	741
CHROOMONAS	806	FLAGELLATES	221	MELOSIRA	456
MELOSIRA	806	TRACHELOMONAS	184	NITZSCHIA	456
CRYPTOMONAS	127	CHROOMONAS	147	CRYPTOMONAS	285
CHLOROCOCCAL CELLS	127	COELASTRUM	37	SKELETONEMA	114
OTHER	338	OTHER	146	OTHER	341
TOTAL	3095	TOTAL	1103	TOTAL	2393

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	18455.	••••••••••	••••••••••	83895.	102350.
NITROGEN	37100.	••••••••••	••••••••••	739780.	776880.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	24850.	76.	2.07
NITROGEN	515860.	34.	15.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
DELAWARE RIVER	9.110	1942.5	0.307	1.746	37.	244.
SLOUGH CREEK	0.650	109.8	0.122	1.363	12.	223.
LITTLE SLOUGH CREEK	0.088	47.1	0.164	1.918	10.	113.
ROCK CREEK	0.200	35.5	0.123	1.696	22.	301.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
BRUSH CREEK	0.071	1.577
EVANS CREEK	0.066	0.817
FISHPOND CREEK	0.139	2.279

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - POMONA RESERVOIR (EUTROPHIC)
COUNTY - OSAGE
STORET NO. - 2012 WORKING PAPER NO. 522. NTIS ACCESSION NO. PB-269 246/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	834.00	16.19	6.4	5.333	193.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
142.	327.	0.5	0.040	0.021	1.240	1.650

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
8.3	0.6 - 8.8 (2)	(4/11/74) P	(6/25/74) P	(10/ 1/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/11/74 GENERA	COUNT	6/25/74 GENERA	COUNT	10/ 1/74 GENERA	COUNT
ANKISTRODESMUS	1663	MELOSIRA	2872	MELOSIRA	184
STEPHANODISCUS	489	STEPHANODISCUS	801	CHROOMONAS	92
MELOSIRA	391	EUGLENA	94	MERISMOPEDIA	92
CHROOMONAS	342	CRYPTOMONAS	47	GLENODINIUM	46
CRYPTOMONAS	147	SCENEDESMUS	47		
OTHER	50	OTHER	0	OTHER	0
TOTAL	3082	TOTAL	3861	TOTAL	414

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3245.	••••••••••	••••••••••	12630.	15875.
NITROGEN	9230.	••••••••••	••••••••••	360805.	370035.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	13385.	16.	0.98
NITROGEN	316370.	15.	22.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HUNDRED TEN MILE CREEK	0.460	77.4	0.119	3.317	13.	577.
DRAGOON CREEK	1.690	295.3	0.095	2.246	13.	409.
SWITZLER CREEK	0.610	102.3	0.239	3.204	37.	566.
PLUMMER CREEK	0.190	31.9	0.061	1.802	11.	350.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - TORONTO RESERVOIR (EUTROPHIC)
COUNTY - GREENWOOD, WOODSON
STORET NO. - 2013 WORKING PAPER NO. 523. NTIS ACCESSION NO. PB-269 467/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1934.70	11.33	2.5	14.720	22.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO-P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
122.	327.	0.3	0.067	0.011	0.425	0.675

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
6.6	3.6 - 5.1 (2)	(4/10/74) P (6/24/74) NO DATA (10/ 2/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/10/74 GENERA	COUNT	6/24/74 GENERA	COUNT	10/ 2/74 GENERA	COUNT
STEPHANODISCUS	2355	CRYPTOMONAS	255	ANABAENA	103
CRYPTOMONAS	449	CHROOMONAS	255	CRYPTOMONAS	103
CHROOMONAS	393	MELOSIRA	127	CHROOMONAS	69
MELOSIRA	336	STEPHANODISCUS	42	MELOSIRA	69
ANKISTRODESMUS	168			CHLAMYDOMONAS	34
OTHER	0	OTHER	0	OTHER	139
TOTAL	3701	TOTAL	679	TOTAL	517

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2290.	**********	15.	23300.	25605.
NITROGEN	6875.	**********	565.	629325.	636765.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	35940.	LOSS	2.26
NITROGEN	661285.	LOSS	56.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
VERDIGRIS RIVER	5.790	795.1	0.053	1.262	10.	280.
WALNUT CREEK	2.630	331.5	0.068	1.234	14.	346.
WEST CREEK	2.420	305.6	0.058	1.305	12.	360.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
DRY CREEK	0.053	1.092

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - TUTTLE CREEK RESERVOIR (EUTROPHIC)
COUNTY - MARSHALL, POTTAWATOMIE, RILEY
STORET NO. - 2014 WORKING PAPER NO. 524. NTIS ACCESSION NO. PB-264 252/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	24967.60	63.94	8.2	54.748	139.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
197.	487.	0.8	0.162	0.067	0.970	1.460

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
11.3	**********	(4/11/74) N (6/25/74) NO DATA (10/ 2/74) P AND N

SUMMARY OF PHYTOPLANKTON DATA

4/11/74 GENERA	COUNT	6/25/74 GENERA	COUNT	10/ 2/74 GENERA	COUNT
STEPHANODISCUS	10947	STEPHANODISCUS	1703	NITZSCHIA	1641
CHROOMONAS	2238	CHROOMONAS	183	STEPHANODISCUS	1452
CRYPTOMONAS	241	MELOSIRA	61	FLAGELLATES	284
ANKISTRODESMUS	181	CRYPTOMONAS	30	SKELETONEMA	189
NITZSCHIA	60	EUGLENA	30	CHROOMONAS	158
OTHER	62	OTHER	76	OTHER	95
TOTAL	13729	TOTAL	2083	TOTAL	3819

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	12870.	**********	**********	1411435.	1424305.
NITROGEN	43220.	**********	**********	7683290.	7726510.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	229125.	84.	22.28
NITROGEN	4192595.	46.	120.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BIG BLUE RIVER	23.270	12372.4	0.747	4.086	70.	346.
OTTER CREEK	0.140	57.0	0.106	1.644	13.	182.
WEST FANCY CREEK	0.480	271.9	0.164	2.712	15.	266.
NORTH FORK FANCY CREEK	0.290	93.0	0.166	2.549	15.	249.
COON CREEK	0.810	255.4	0.218	2.910	14.	875.
LITTLE BLUE RIVER	18.580	8609.2	0.635	2.996	50.	251.
MORIDOUX CREEK	0.940	303.0	0.305	2.627	29.	402.
BLACK VERMILLION RIVER	2.510	735.6	0.235	2.540	23.	288.
CLEAR FORK	0.370	115.5	0.113	1.991	11.	204.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)

MCINTIRE CREEK	0.075	2.548
CORNDODGER CREEK	0.067	1.883
CEDAR CREEK	0.040	0.868
MILL CREEK	0.126	2.067
SPRING CREEK	0.194	2.383

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN KANSAS

NAME - WILSON RESERVOIR (MESOTHOPHIC)
COUNTY - RUSSELL
STORET NO. - 2015 WORKING PAPER NO. 529. NTIS ACCESSION NO. PB-269 837/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	4965.00	36.42	6.4	5.144	2.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
140.	224.	1.4	0.023	0.004	0.265	0.835

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
8.9	0.1	(4/12/74) P (6/26/74) NO DATA (10/ 1/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/12/74 GENERA	COUNT	6/26/74 GENERA	COUNT	10/ 1/74 GENERA	COUNT
SYNEDRA	3438	CHROOMONAS	575	STEPHANODISCUS	1847
CHROOMONAS	1413	CRYPTOMONAS	157	OSCILLATORIA	1203
STEPHANODISCUS	1130	OOCYSTIS	52	SYNEDRA	601
OOCYSTIS	1083	SPHAEROCYSTIS	52	OOCYSTIS	258
ANKISTRODESMUS	659			DACTYLOCOCCOPSIS	129
OTHER	1460	OTHER	0	OTHER	516
TOTAL	9183	TOTAL	836	TOTAL	4554

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3795.	**********	**********	13340.	17135.
NITROGEN	11385.	**********	**********	278660.	290045.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	5069.	70.	0.47
NITROGEN	160140.	45.	8.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SALINE RIVER	3.440	3890.2	0.099	1.238	3.	35.
CEDAR CREEK	0.076	71.0	0.055	2.121	2.	70.
PARADISE CREEK	0.600	545.7	0.149	2.207	0.1	52.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - ANACOCO LAKE (MESOTHOPHIC)
COUNTY - VERNON
STORET NO. - 2201 WORKING PAPER NO. 528. NTIS ACCESSION NO. PB-270 078/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	539.70	10.52	2.8	7.540	45.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
14.	37.	1.1	0.031	0.007	0.080	0.545

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
8.7	0.1 - 1.3 (2)	(3/20/74) N	(5/30/74) N	(11/ 8/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/20/74 GENERA	COUNT	5/30/74 GENERA	COUNT	11/ 8/74 GENERA	COUNT
ANKISTRODESMUS	2270	ASTERIONELLA	1554	FLAGELLATES	863
FLAGELLATES	1027	MELOSIRA	706	TABELLARIA	609
MELOSIRA	865	MERISMOPEDIA	518	CRYPTOMONAS	355
ANACYSTIS(MICROCYSTIS)	540	CYCLOTELLA	377	CENTRIC DIATOM	384
CRUCIGENIA	324	CRYPTOMONAS	330	ANKISTRODESMUS	203
OTHER	1514	OTHER	1648	OTHER	863
TOTAL	6540	TOTAL	5133	TOTAL	3197

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	25.	6415.	6440.
NITROGEN	**********	**********	905.	162690.	163595.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	7885.	LOSS	0.61
NITROGEN	250740.	LOSS	15.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BAYOU ANACOCO	4.140	295.3	0.022	0.610	10.	248.
CANEY CREEK	0.258	18.1	0.022	0.690	10.	320.
SANDY CREEK	0.578	40.9	0.027	0.775	11.	363.
PRAIRIE CREEK	1.610	115.0	0.038	0.765	16.	344.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
JURDAN CREEK	0.018	0.543
WYATT CREEK	0.118	0.557

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN LOUSIANA

NAME - LAKE H[illegible]TINEAU (EUTHOPHIC)
COUNTY - [illegible]IVILLE, MOSSIEM, WERSTEN
STORET NO. - 2203 WORKING PAPER NO. 529. NTIS ACCESSION NO. PB-269 229/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	3752.90	89.67	2.1	41.200	42.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
19.	111.	1.1	0.061	0.018	0.100	0.650

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
12.9	3.5	(3/21/74) N	(5/31/74) N	(11/11/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/21/74 GENERA	COUNT	5/31/74 GENERA	COUNT	11/11/74 GENERA	COUNT
MELOSIRA	865	FLAGELLATES	1163	FLAGELLATES	560
FLAGELLATES	595	MELOSIRA	862	CRYPTOMONAS	252
DACTYLOCOCCOPSIS	431	CRYPTOMONAS	431	MELOSIRA	140
SYNEDRA	329	DACTYLOCOCCOPSIS	215	CENTRIC DIATOM	56
CRYPTOMONAS	324	LYNGBYA	172	TRACHELOMONAS	28
OTHER	921	OTHER	1414	OTHER	140
TOTAL	3463	TOTAL	4257	TOTAL	1176

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	28100.	**********	460.	87515.	116075.
NITROGEN	77685.	**********	17860.	995825.	1090870.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	63385.	45.	1.67
NITROGEN	874300.	19.	15.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CLARKS BAYOU	3.150	279.7	0.096	0.898	30.	271.
BOURNE CREEK	0.580	51.9	0.278	1.667	99.	588.
BAYOU DOMENGAT	31.950	2934.5	0.081	0.784	21.	242.
BRUSHY CREEK	1.270	111.9	0.069	0.742	25.	275.
TOULON BAYOU	0.490	42.7	0.052	0.668	19.	203.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
COOLEY CREEK	0.039	0.666

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUISIANA

NAME = BLACK BAYOU RESERVOIR (EUTROPHIC)
COUNTY = CADDO
STORET NO. = 2204 WORKING PAPER NO. 530. NTIS ACCESSION NO. PB-269 476/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	484.60	10.06	1.4	6.960	37.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	107.	1.2	0.046	0.009	0.090	0.630

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
		(3/23/74) N	(6/ 3/74) N	(8/26/74) N	(11/11/74) N
17.8	0.1				

SUMMARY OF PHYTOPLANKTON DATA

3/22/74 GENERA	COUNT	6/ 3/74 GENERA	COUNT	8/26/74 GENERA	COUNT	11/11/74 GENERA	COUNT
DACTYLOCOCCOPSIS	611	ASTERIONELLA	4802	CENTRIC DIATOM	2007	CHYPTOMONAS	220
CHYPTOMONAS	500	APHANOTHECE	2036	ANKISTRODESMUS	618	DACTYLOCOCCOPSIS	147
DINOHRYON	445	FLAGELLATES	1200	LYNGBYA	618	EUGLENA	110
FLAGELLATES	445	ANKISTRODESMUS	626	ANABAENA	463	OSCILLATORIA	37
OSCILLATORIA	222	MELOSIRA	418	CRYPTOMONAS	386	PHACUS	37
OTHER	223	OTHER	1982	OTHER	2973	OTHER	0
TOTAL	2446	TOTAL	11864	TOTAL	7065	TOTAL	551

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3175.	**********	30.	14010.	17215.
NITROGEN	9175.	**********	1120.	205810.	216105.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	7989.	54.	1.07
NITROGEN	170090.	21.	13.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BLACK BAYOU	3.370	295.3	0.073	0.932	23.	305.
STATE LINE CREEK	1.590	139.6	0.078	0.874	26.	342.
GRAY BRANCH	0.190	10.2	0.040	0.904	14.	310.

VI. MEAN NUTRIENT CONCENTRATIONS IN ENGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED STREAM #1 *	3.702	12.467
MYRTIS CREEK	0.074	1.035
MOUSE CREEK	0.037	0.692

* BELOW POINT SOURCE.

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN LOUSIANA

NAME - BLACK LAKE (EUTHOPHIC)
COUNTY - NATCHITUCHES, RED RIVER
STORET NO. - 2219 WORKING PAPER NO. 531, NTIS ACCESSION NO. PB-269 470/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	52.24	2.6	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	125.	1.2	0.077	0.015	0.150	0.620

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
12.7	••••••••••	(5/30/74) P	(8/23/74) N

SUMMARY OF PHYTOPLANKTON DATA

5/30/74 GENERA	COUNT	8/23/74 GENERA	COUNT
FLAGELLATES	1199	LYNGBYA	9900
KIRCHNERIELLA	1133	OACTYLOCOCCOPSIS	2903
ATTHEYA	1066	ANABAENOPSIS	1340
BLUE-GREEN FILAMENT	799	APHANOTHECE	670
CRYPTOMONAS	666	SPERMATOZOOPSIS	670
OTHER	5131	OTHER	3420
TOTAL	9994	TOTAL	19903

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - BRUIN LAKE (EUTROPHIC)
COUNTY - TENSAS
STORET NO. - 2202 WORKING PAPER NO. 532. NTIS ACCESSION NO. PB-269 260/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	9.48	9.1	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
92.	168.	1.3	0.057	0.012	0.250	0.780

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
16.4	3.6	(3/19/74) P (5/30/74) N (11/11/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/19/74 GENERA	COUNT	5/30/74 GENERA	COUNT	11/11/74 GENERA	COUNT
MELOSIRA	1189	DACTYLOCOCCOPSIS	24829	DACTYLOCOCCOPSIS	4945
CRYPTOMONAS	743	NITZSCHIA	13770	OSCILLATORIA	2448
DACTYLOCOCCOPSIS	520	ANABAENOPSIS	3882	FLAGELLATES	832
ANKISTRODESMUS	297	OSCILLATORIA	2271	NITZSCHIA	735
MICRACTINIUM	297	MELOSIRA	1977	CRYPTOMONAS	685
OTHER	1191	OTHER	5640	OTHER	4064
TOTAL	4237	TOTAL	52369	TOTAL	13709

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - BUNDICK LAKE (EUTROPHIC)
COUNTY - BEAUREGARD
STORET NO. - 2205 WORKING PAPER NO. 533. NTIS ACCESSION NO. PB-269 839/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	546.50	7.07	1.6	7.300	15.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
11.	59.	0.8	0.157	0.073	0.135	0.820

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
20.5	7.3 - 8.0 (2)	(3/20/74) N	(5/30/74) N	(11/12/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/20/74 GENERA	COUNT	5/30/74 GENERA	COUNT	11/12/74 GENERA	COUNT
MELOSIRA	8775	MELOSIRA	3719	DACTYLOCOCCOPSIS	533
CRYPTOMONAS	1051	KIRCHNERIELLA	1438	MELOSIRA	374
TRACHELOMONAS	526	CHLAMYDOMONAS	967	CYCLOTELLA	373
APHANOCAPSA	283	CRYPTOMONAS	694	SCENEDESMUS	373
CRUCIGENIA	283	ANACYSTIS(MICROCYSTIS)	545	KIRCHNERIELLA	320
OTHER	1982	OTHER	4810	OTHER	959
TOTAL	12900	TOTAL	12173	TOTAL	2932

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	14275.	**********	5.	38745.	53025.
NITROGEN	38320.	**********	20.	213615.	251955.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	31130.	41.	7.50
NITROGEN	264075.	LOSS	35.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BUNDICK CREEK	4.150	310.8	0.398	1.195	79.	392.
PALMETTO CREEK	0.610	45.6	0.293	1.226	122.	537.
DEER CREEK	0.590	44.5	0.113	0.771	47.	325.
DRY CREEK	0.150	11.3	0.093	1.087	47.*	325.*

* ESTIMATED

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - COCODRIE LAKE (EUTHOPHIC)
COUNTY - CONCORDIA
STORET NO. - 2207 WORKING PAPER NO. 534. NTIS ACCESSION NO. PB-269 493/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	3.99	4.9	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
56.	141.	0.5	0.090	0.026	0.400	0.995

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
35.3	7.1	(3/19/74) N	(5/29/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/19/74 GENERA	COUNT	5/29/74 GENERA	COUNT
FLAGELLATES	2134	CYCLOTELLA	6595
MERISMOPEDIA	459	STEPHANODISCUS	2721
NITZSCHIA	459	MELOSIRA	2593
ANACYSTIS(MICROCYSTIS)	306	FLAGELLATES	1729
ANKISTRODESMUS	268	PENNATE DIATOMS	1121
OTHER	431	OTHER	2402
TOTAL	4057	TOTAL	17161

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - COCODRIE LAKE (EUTROPHIC)
COUNTY - RAPIDES
STORET NO. - 2220 WORKING PAPER NO. 535. NTIS ACCESSION NO. PB-269 477/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	621.40	24.68	0.5	9.660	14.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
82.	162.	0.5	0.106	0.014	0.050	0.820

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
33.4	1.4	(5/29/74) N	(11/12/74) N

SUMMARY OF PHYTOPLANKTON DATA

5/29/74 GENERA	COUNT	11/12/74 GENERA	COUNT
FLAGELLATES	1592	LYNGBYA	17947
DACTYLOCOCCOPSIS	1493	DACTYLOCOCCOPSIS	6505
SYNEDRA	1393	NITZSCHIA	4075
CRYPTOMONAS	1294	MELOSIRA	2508
CENTRIC DIATOM	896	ANACYSTIS(MICROCYSTIS)	940
OTHER	3481	OTHER	6348
TOTAL	10149	TOTAL	38323

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	30.	14655.	14685.
NITROGEN	**********	**********	1065.	179370.	180435.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	13075.	11.	0.60
NITROGEN	186195.	LOSS	7.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
COCODRIE BAYOU	2.560	186.7	0.088	0.751	36.	343.
SPRING CREEK	2.440	177.7	0.033	0.444	14.	191.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
HURRICANE CREEK	0.061	0.438
LITTLE SPRING CREEK	0.344	1.893

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - LAKE CONCORDIA (EUTROPHIC)
COUNTY - CONCORDIA
STORET NO. - 2209 WORKING PAPER NO. 536. NTIS ACCESSION NO. PB-269 494/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	4.25	6.1	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
147.	297.	0.8	0.076	0.009	0.080	0.820

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
33.0	2.8 - 7.2 (2)	(3/19/74) N	(5/30/74) N	(11/11/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/19/74 GENERA	COUNT	5/30/74 GENERA	COUNT	11/11/74 GENERA	COUNT
MELOSIRA	36811	DACTYLOCOCCOPSIS	3889	DACTYLOCOCCOPSIS	11286
DACTYLOCOCCOPSIS	2271	NITZSCHIA	2608	CYCLOTELLA	3587
CYCLOTELLA	847	MERISMOPEDIA	2150	MELOSIRA	2678
FLAGELLATES	373	FLAGELLATES	2105	CRYPTOMONAS	1099
CRYPTOMONAS	373	ANABAENOPSIS	1098	OSCILLATORIA	1005
OTHER	1288	OTHER	5079	OTHER	1578
TOTAL	41963	TOTAL	16929	TOTAL	21233

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - COTILE RESERVOIR (MESO-EUTROPHIC)
COUNTY - RAPIDES
STORET NO. - 2208 WORKING PAPER NO. 537. NTIS ACCESSION NO. PB-270 064/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	104.60	7.25	4.3	1.700	206.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
14.	42.	1.5	0.037	0.011	0.100	0.520

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
12.6	0.3	(3/20/74) N	(5/30/74) N	(11/12/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/20/74 GENERA	COUNT	5/30/74 GENERA	COUNT	11/12/74 GENERA	COUNT
MELOSIRA	3220	DACTYLOCOCCOPSIS	639	MERISMOPEDIA	1300
CRYPTOMONAS	887	CYCLOTELLA	693	FLAGELLATES	917
FLAGELLATES	794	CRYPTOMONAS	423	ANACYSTIS(MICROCYSTIS)	917
MERISMOPEDIA	700	ASTERIONELLA	352	KIRCHNERIELLA	841
ANKISTRODESMUS	607	ANACYSTIS(MICROCYSTIS)	352	APHANOCAPSA	459
OTHER	3080	OTHER	1760	OTHER	1991
TOTAL	9288	TOTAL	4014	TOTAL	6425

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	5.	3380.	3385.
NITROGEN	**********	**********	105.	32420.	32525.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	4150.	LOSS	0.47
NITROGEN	45175.	LOSS	4.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
DYER CREEK	0.110	8.7	0.076	0.522	29.	194.
HEMPHILL CREEK	0.370	22.1	0.071	0.580	37.	301.
INDIAN CREEK	0.220	13.3	0.059	0.635	32.	239.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - CROSS LAKE (EUTROPHIC)
COUNTY - CADDO
STORET NO. - 2210 WORKING PAPER NO. 538. NTIS ACCESSION NO. PB-270 052/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	655.30	35.77	2.7	4.870	180.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
21.	185.	0.6	0.057	0.010	0.080	0.830

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
38.4	1.0 - 4.1 (3)	(3/23/74) P AND N	(6/ 3/74) N	(8/26/74) N	(11/11/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/23/74 GENERA	COUNT	6/ 3/74 GENERA	COUNT	8/26/74 GENERA	COUNT	11/11/74 GENERA	COUNT
MELOSIRA	8560	ANABAENOPSIS	22203	ANABAENOPSIS	180343	DACTYLOCOCCOPSIS	4566
PENNATE DIATOMS	1863	RAPHIDIOPSIS	3021	RAPHIDIOPSIS	20210	ANKISTRODESMUS	4206
ANACYSTIS(MICROCYSTIS)	1514	CHROOCOCCUS	2491	MERISMOPEDIA	3042	ANACYSTIS(MICROCYSTIS)	3091
LUNATE CELLS	1398	LYNGBYA	2279	OSCILLATORIA	1817	CHROOCOCCUS	2445
ANKISTRODESMUS	1165	ANABAENA	1749	FLAGELLATES	1095	MERISMOPEDIA	1007
OTHER	5415	OTHER	11829	OTHER	6863	OTHER	5500
TOTAL	19915	TOTAL	43572	TOTAL	213370	TOTAL	20815

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1770.	**********	105.	10200.	12075.
NITROGEN	5670.	**********	3905.	156375.	165950.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	11965.	1.	0.34
NITROGEN	167780.	LOSS	4.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CROSS BAYOU	0.990	132.9	0.135	0.889	13.	168.
PAW PAW BAYOU	1.540	208.5	0.066	0.748	15.	183.
SHETTLEWORTH BAYOU	0.190	25.5	0.065	0.772	10.	178.
LOGAN BAYOU	0.370	48.7	0.105	0.988	23.	240.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
PINEY BAYOU	0.068	0.944
AQUEDUCT	0.125	0.869
UNNAMED STREAM #1	0.333	1.580

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - BAYOU D'ARBONNE LAKE (MESO-EUTROPHIC)
COUNTY - UNION, LINCOLN
STORET NO. - 2211 WORKING PAPER NO. 539, NTIS ACCESSION NO. PB-270 035/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	4162.10	61.64	2.6	49.790	36.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	88.	1.1	0.038	0.011	0.100	0.460

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
6.8	0.1 - 0.2 (2)	(3/21/74) P AND N (5/31/74) P (11/11/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/21/74 GENERA	COUNT	5/31/74 GENERA	COUNT	11/11/74 GENERA	COUNT
FLAGELLATES	842	FLAGELLATES	625	FLAGELLATES	682
MELOSIRA	577	CYCLOTELLA	208	CRYPTOMONAS	551
DACTYLOCOCCOPSIS	355	CRYPTOMONAS	182	RAPHIDIOPSIS	175
PENNATE DIATOMS	310	ASTERIONELLA	156	ANKISTHODESMUS	97
CRYPTOMONAS	177	SYNEDRA	156	DACTYLOCOCCOPSIS	83
OTHER	223	OTHER	678	OTHER	726
TOTAL	2484	TOTAL	2005	TOTAL	2314

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	25140.	**********	70.	50850.	82060.
NITROGEN	67535.	**********	2640.	1184730.	1254905.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	48615.	41.	1.33
NITROGEN	1361750.	LOSS	20.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BAYOU D'ARBONNE	15.000	1201.8	0.052	0.652	2.	209.
CYPRESS CREEK	0.910	74.6	0.099	1.046	36.	432.
STONE CREEK	1.270	105.2	0.111	1.136	36.	446.
MID FORK BAYOU D'ARBONNE	7.360	554.3	0.052	0.612	21.	256.
CONNEY BAYOU	19.510	1748.3	0.035	0.768	12.	274.
CAMP CREEK	0.580	51.8	0.040	1.011	28.	347.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - FALSE RIVER LAKE (EUTHOPHIC)
COUNTY - POINTE COUPEE
STORET NO. - 2212 WORKING PAPER NO. 540. NTIS ACCESSION NO. PB-269 253/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	11.78	7.1	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
136.	235.	1.5	0.082	0.023	0.130	0.860

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
24.6	2.9 - 0.1 (2)	(3/21/74) N	(5/29/74) N	(11/12/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/21/74 GENERA	COUNT	5/29/74 GENERA	COUNT	11/21/74 GENERA	COUNT
APHANIZOMENON	7918	DACTYLOCOCCOPSIS	23937	DACTYLOCOCCOPSIS	3238
ANABAENA	1220	FLAGELLATES	2462	OSCILLATORIA	2275
MELOSIRA	394	STEPHANODISCUS	1515	NITZSCHIA	1138
FLAGELLATES	158	NITZSCHIA	1288	CRYPTOMONAS	1007
STEPHANODISCUS	158	OSCILLATORIA	985	CRYPTOMONAS	963
OTHER	158	OTHER	7577	OTHER	1885
TOTAL	10006	TOTAL	37764	TOTAL	10506

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - INDIAN CREEK RESERVOIR (EUTHUPHIC)
COUNTY - RAPIDES
STORET NO. - 2213 WORKING PAPER NO. 541. NTIS ACCESSION NO. PB-269 563/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	5M.30	9.11	3.4	0.810	441.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
18.	39.	1.1	0.031	0.010	0.150	0.600

III. HIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTHIENT AT SAMPLING TIME		
21.5	0.2 - 0.8 (2)	(3/22/7+) P	(5/30/7+) P	(11/12/7+) P AND N

SUMMARY OF PHYTOPLANKTON DATA

3/22/7+ GENERA	COUNT	5/30/7+ GENERA	COUNT	11/12/7+ GENERA	COUNT
MERISMOPEDIA	2990	LUNATE CELLS	979	CYCLOTELLA	1085
MELOSIRA	2036	FLAGELLATES	287	MELOSIRA	956
SCHIZOCHLAMYS	867	KIRCHNERIELLA	276	MERISMOPEDIA	697
CYCLOTELLA	737	NITZSCHIA	270	CRYPTOMONAS	494
FLAGELLATES	693	CHLAMYDOMONAS	260	KIRCHNERIELLA	387
OTHER	2589	OTHER	2224	OTHER	936
TOTAL	9922	TOTAL	4296	TOTAL	5155

IV. NUTHIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	555.	555.
NITHOGEN	••••••••••	••••••••••	70.	18685.	18755.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1085.	LOSS	0.06
NITHOGEN	18030.	4.	2.1

V. NON-POINT-SOURCE NUTHIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
INDIAN CREEK	0.210	14.8	0.019	0.409	8.	180.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - SALINE LAKE (EUTROPHIC)
COUNTY - LASALLE
STORET NO. - 2214

WORKING PAPER NO. 542. NTIS ACCESSION NO. PB-269 468/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	7.98	2.7	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
14.	99.	0.2	0.111	0.025	0.350	1.080

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
15.3	5.2	(3/19/74) N (5/29/74) P (11/12/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/19/74 GENERA	COUNT	5/29/74 GENERA	COUNT	11/12/74 GENERA	COUNT
FLAGELLATES	1244	FLAGELLATES	909	MELOSIRA	287
DACTYLOCOCCOPSIS	474	MELOSIRA	795	NITZSCHIA	172
MELOSIRA	237	ANKISTRODESMUS	625	CRYPTOMONAS	115
CRUCIGENIA	237	KIRCHNERIELLA	454	FLAGELLATES	57
DINOBRYON	118	NITZSCHIA	454	ANACHELOMONAS	57
OTHER	531	OTHER	1623	OTHER	0
TOTAL	2841	TOTAL	4060	TOTAL	688

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN LOUSIANA

NAME - TUNKEY CHEEK LAKE (EUTROPHIC)
COUNTY - FRANKLIN
STORET NO. - 2215 WORKING PAPER NO. 543. NTIS ACCESSION NO. PB-270 868/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	461.00	12.54	2.0	5.029	57.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
26.	82.	0.6	0.176	0.033	0.170	0.820

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
22.0	1.9 - 3.7 (2)	(3/19/74) N	(5/30/74) N	(11/11/74) N

SUMMARY OF PHYTOPLANKTON DATA

GENERA	3/19/74 COUNT	GENERA	5/30/74 COUNT	GENERA	11/11/74 COUNT
FLAGELLATES	1843	MELOSIRA	797	FLAGELLATES	738
MELOSIRA	778	DACTYLOCOCCOPSIS	644	MELOSIRA	683
PENNATE DIATOMS	115	OSCILLATORIA	613	STEPHANODISCUS	547
CHYPTOMONAS	86	CENTRIC DIATOM	552	CHYPTOMONAS	495
OSCILLATONIA	86	CHYPTOMONAS	430	THACHELOMONAS	465
OTHER	377	OTHER	2296	OTHER	1717
TOTAL	3285	TOTAL	5332	TOTAL	4615

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3915.	**********	5.	43305.	47225.
NITROGEN	8970.	**********	265.	238660.	247895.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	29890.	37.	3.77
NITROGEN	202615.	18.	19.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
TUNKEY CHEEK	1.820	160.6	0.234	1.238	54.	286.
GRAYSON BAYOU	0.106	23.8	0.481	2.285	65.	287.
WEST TUNKEY CHEEK	1.048	92.7	0.422	1.740	119.	504.
LITTLE TUNKEY CHEEK	0.860	77.2	0.480	2.415	169.	824.
UNNAMED STREAM	0.030	2.6	0.466	1.563	175.	521.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN LOUSIANA

NAME - LAKE VERNET (EUTROPHIC)
COUNTY - ASSUMPTION
STORET NO. - 2216 WORKING PAPER NO. 544. NTIS ACCESSION NO. PB-269 469/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	56.98	1.5	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
93.	253.	0.5	0.163	0.056	0.100	1.260

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
		(3/21/74) N	(5/29/74) N	(8/21/74) N	(11/14/74) N
62.0	**********				

SUMMARY OF PHYTOPLANKTON DATA

3/21/74 GENERA	COUNT	5/29/74 GENERA	COUNT	8/21/74 GENERA	COUNT
PENNATE DIATOMS	4541	OSCILLATORIA	93324	OSCILLATORIA	68499
FLAGELLATES	1904	DACTYLOCOCCOPSIS	17742	LYNGBYA	20338
ANKISTRODESMUS	1099	ANABAENOPSIS	4436	RAPHIDIOPSIS	9680
SCENEDESMUS	879	NITZSCHIA	3283	ANABAENOPSIS	4882
LYNGBYA	366	ANKISTRODESMUS	2306	CENTRIC DIATOM	3091
OTHER	623	OTHER	13129	OTHER	19198
TOTAL	9412	TOTAL	134229	TOTAL	125608

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN LOUSIANA

NAME - LAKE VERNON (MESOTROPHIC)
COUNTY - VERNON
STORET NO. - 2217 WORKING PAPER NO. 528. NTIS ACCESSION NO. PB-270 078/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	295.30	17.09	4.1	4.130	197.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	31.	1.6	0.018	0.007	0.120	0.620

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
4.9	0.1 - 0.3 (2)	(3/20/74) P	(5/30/74) P	(11/ 8/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/20/74 GENERA	COUNT	5/30/74 GENERA	COUNT	11/ 8/74 GENERA	COUNT
MELOSIRA	723	MERISMOPEDIA	10222	MERISMOPEDIA	935
CRYPTOMONAS	337	APHANOTHECE	3903	ANACYSTIS(MICROCYSTIS)	842
CENTRIC DIATOM	241	MELOSIRA	651	MELOSIRA	655
SYNEDRA	96	CRUCIGENIA	524	CYCLOTELLA	514
BLUE-GREEN FILAMENT	48	KIRCHNERIELLA	442	KIRCHNERIELLA	374
OTHER	240	OTHER	1684	OTHER	1686
TOTAL	1685	TOTAL	17426	TOTAL	5006

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	20.	4150.	4170.
NITROGEN	**********	**********	695.	99680.	100375.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2995.	28.	0.24
NITROGEN	73175.	27.	5.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BRUSHY CREEK	0.210	15.3	0.051	0.807	22.	365.
WEST ANACOCO CREEK	0.800	57.5	0.030	0.646	12.	305.
EAST ANACOCO CREEK	1.340	95.8	0.077	0.694	16.	256.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MISSOURI

NAME - CLEARWATER LAKE (MESOTROPHIC)
COUNTY - REYNOLDS, WAYNE
STORET NO. - 2901 WORKING PAPER NO. 547. NTIS ACCESSION NO. PB-268 311/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	2325.80	6.60	4.1	24.060	13.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
99.	201.	1.4	0.017	0.004	0.150	0.300

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
3.6	0.1	(4/ 9/74) P	(6/18/74) P	(10/ 8/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/ 9/74 GENERA	COUNT	6/18/74 GENERA	COUNT	10/ 8/74 GENERA	COUNT
CHROOMONAS	266	CHROOMONAS	428	CRYPTOMONAS	165
NITZSCHIA	222	SYNEDRA	238	MELOSIRA	165
CRYPTOMONAS	177	CRYPTOMONAS	190	COCCOID CELLS	55
MELOSIRA	177	CENTRIC DIATOM	95	PERIDINIUM	55
CYCLOTELLA	133	ANKISTRODESMUS	48	TRACHELOMONAS	55
OTHER	45	OTHER	190	OTHER	0
TOTAL	1020	TOTAL	1189	TOTAL	495

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1265.	**********	15.	6380.	7660.
NITROGEN	3560.	**********	560.	782015.	786135.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	20965.	LOSS	1.16
NITROGEN	973230.	LOSS	119.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BLACK RIVER	15.250	1276.9	0.010	1.063	4.	383.
SINKING CREEK	1.250	191.7	0.009	1.078	2.	230.
LOGAN CREEK	3.230	445.5	0.013	1.441	0.9	332.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
MEAN BRANCH	0.018	1.362

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MISSOURI

NAME - POMME DE TERRE RESERVOIR (EUTROPHIC)
COUNTY - POLK, HICKORY
STORET NO. - 2902 WORKING PAPER NO. 548. NTIS ACCESSION NO. PB-268 384/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1592.80	31.65	9.5	11.810	314.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
120.	222.	1.3	0.043	0.008	0.275	0.805

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
9.4	1.8 - 8.1 (3)	(4/ 8/74) P	(6/20/74) P	(10/ 8/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/ 8/74 GENERA	COUNT	6/20/74 GENERA	COUNT	10/ 8/74 GENERA	COUNT
MELOSIRA	1524	APHANIZOMENON	887	MELOSIRA	1233
STEPHANODISCUS	1001	CYCLOTELLA	887	DACTYLOCOCCOPSIS	596
CRYPTOMONAS	334	CARTERIA	493	CHROOMONAS	340
EUGLENA	333	CRYPTOMONAS	444	CRUCIGENIA	256
CHLAMYDOMONAS	238	CHROOMONAS	394	SCENEDESMUS	170
OTHER	285	OTHER	1677	OTHER	596
TOTAL	3715	TOTAL	4782	TOTAL	3191

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	7120.	**********	25.	13635.	20780.
NITROGEN	17405.	**********	990.	588640.	607035.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	12680.	39.	0.66
NITROGEN	433540.	29.	19.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
POMME DE TERRE RIVER	4.970	714.8	0.066	1.572	14.	406.
LINDLEY RIVER	2.600	297.8	0.065	1.477	8.	446.
DRY BUSH CREEK	0.450	77.7	0.024	1.194	2.	240.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
INGALLS CREEK	0.019	1.209
PIPER CREEK *	0.727	1.767
BELLS BRANCH	0.038	1.334
JORDAN CREEK	0.019	1.137
HOUSTON CREEK	0.021	1.297

* BELOW POINT SOURCE.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MISSOURI

NAME = STOCKTON RESERVOIR (EUTROPHIC)
COUNTY = DADE, POLK, CEDAR
STORET NO. = 2903 WORKING PAPER NO. 549, NTIS ACCESSION NO. PB-268 328/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	3004.40	100.77	7.3	22.650	1.1

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
132.	230.	1.8	0.022	0.006	0.670	0.985

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
9.0	0.1 - 1.2 (4)	(4/ 8/74) P	(6/24/74) P	(10/ 8/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/ 8/74 GENERA	COUNT	6/24/74 GENERA	COUNT	10/ 8/74 GENERA	COUNT
MELOSIRA	16515	FRAGILARIA	599	MELOSIRA	879
STEPHANODISCUS	3398	MELOSIRA	436	DACTYLOCOCCOPSIS	778
CHROOMONAS	430	CHROOMONAS	381	CHROOMONAS	744
ANKISTRODESMUS	387	CRYPTOMONAS	381	STEPHANODISCUS	271
CRYPTOMONAS	258	TETRAEDRON	163	CRYPTOMONAS	237
OTHER	688	OTHER	328	OTHER	779
TOTAL	21676	TOTAL	2288	TOTAL	3688

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	20700.	**********	5.	28590.	49295.
NITROGEN	56575.	**********	215.	1734420.	1791210.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	10740.	78.	0.49
NITROGEN	1106085.	38.	17.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SAC RIVER	4.390	587.9	0.058	2.704	2.	619.
LITTLE SAC RIVER	4.640	606.1	0.130	2.574	6.	567.
TURNBACK CREEK	3.880	525.8	0.055	2.282	13.	537.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
EAGLE CREEK	0.027	1.090
TURKEY CREEK	0.019	0.826
LIMESTONE CREEK	0.034	0.945
SUNS CREEK	0.054	1.005
WALNUT CREEK	0.026	0.984

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MISSOURI

NAME = THOMAS HILL RESERVOIR (EUTROPHIC)
COUNTY = MACON, RANDOLPH
STORET NO. = 2905 WORKING PAPER NO. 550. NTIS ACCESSION NO. PB-268 265/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	388.50	17.81	4.1	2.140	1.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
56.	257.	0.3	0.082	0.011	1.040	1.550

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
9.8	0.2 - 0.8 (2)	(4/ 8/74) P (6/20/74) P AND N (10/ 7/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/ 8/74 GENERA	COUNT	6/20/74 GENERA	COUNT	10/ 7/74 GENERA	COUNT
CHROOMONAS	140	CHROOMONAS	253	STEPHANODISCUS	2045
CRYPTOMONAS	94	STEPHANODISCUS	253	NITZSCHIA	1217
SCHROEDERIA	94	CRYPTOMONAS	211	MELOSIRA	682
NITZSCHIA	47	MELOSIRA	169	SKELETONEMA	682
		CLOSTERIUM	42	CHROOMONAS	341
OTHER	0	OTHER	0	OTHER	1070
TOTAL	375	TOTAL	928	TOTAL	6037

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	5.	8530.	8535.
NITROGEN	**********	**********	215.	203465.	203680.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3700.	57.	0.48
NITROGEN	107770.	47.	11.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MIDDLE FORK CHARITON R.	0.940	168.3	0.088	2.034	22.	497.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
MIDDLE FK CHARITON R. A3	0.138	2.296
MIDDLE FK CHARITON R. A4	0.254	2.849
STINKING CREEK A1	0.193	2.775
STINKING CREEK A2	0.175	2.764
NORTH FORK CLAYBANK CR.	0.068	2.038
SWEEZEN CREEK	0.160	2.400
UNNAMED CREEK E1	0.044	1.067
UNNAMED CREEK	0.093	1.161

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MISSOURI

NAME - LAKE WAPPAPELLO (EUTROPHIC)
COUNTY - WAYNE, BUTLER
STORET NO. - 2906 WORKING PAPER NO. 551. NTIS ACCESSION NO. PB-268 313/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	3395.50	16.59	3.0	38.610	14.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
68.	139.	1.0	0.033	0.004	0.105	0.350

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
9.6	0.1 - 0.4 (2)	(4/ 9/74) P	(6/18/74) P	(10/ 8/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/ 9/74 GENERA	COUNT	6/18/74 GENERA	COUNT	10/ 8/74 GENERA	COUNT
MELOSIRA	1539	MELOSIRA	1684	MELOSIRA	3759
CHROOMONAS	483	CHROOMONAS	741	CRUCIGENIA	239
NITZSCHIA	483	SKELETONEMA	562	TRACHELOMONAS	239
CRYPTOMONAS	483	ANACYSTIS(MICROCYSTIS)	472	ANKISTRODESMUS	179
DACTYLOCOCCOPSIS	220	DINOBRYON	336	CRYPTOMONAS	119
OTHER	835	OTHER	2135	OTHER	177
TOTAL	4043	TOTAL	5930	TOTAL	4712

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	375.	**********	75.	31510.	31960.
NITROGEN	1120.	**********	2835.	1366125.	1370080.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	52670.	LOSS	1.93
NITROGEN	1526360.	LOSS	82.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ST. FRANCIS RIVER	27.580	2432.0	0.039	1.221	12.	475.
CLARK CREEK	0.580	97.1	0.016	1.076	3.	204.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
WEST FORK LOST CREEK	0.013	1.594
BIG CREEK	0.019	0.971
DRY CREEK	0.017	0.680
TRACE CREEK	0.022	1.059

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEBRASKA

NAME - BRANCHED OAK RESERVOIR (EUTROPHIC)
COUNTY - LANCASTER
STORET NO. - 3101

WORKING PAPER NO. 554. NTIS ACCESSION NO. PB-258 244/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	214.70	7.28	5.5	0.760	2.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
220.	406.	1.1	0.044	0.013	0.070	0.860

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
17.0	**********	(4/17/74) N (7/ 2/74) NO DATA (9/26/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/17/74 GENERA	COUNT	7/ 2/74 GENERA	COUNT	9/26/74 GENERA	COUNT
ASTERIONELLA	15728	CARTERIA	1541	MELOSIRA	5603
FLAGELLATES	2192	FLAGELLATES	572	CRYPTOMONAS	580
DINOBRYON	1334	CRYPTOMONAS	396	APHANIZOMENON	515
CRYPTOMONAS	572	CYSTS	308	FLAGELLATES	322
ANABISTRODESMUS	191	APHANIZOMENON	220	COELOSPHAERIUM	258
OTHER	381	OTHER	926	OTHER	773
TOTAL	20398	TOTAL	3963	TOTAL	8051

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	5250.	5250.
NITROGEN	**********	**********	**********	55755.	55755.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1035.	80.	0.72
NITROGEN	16065.	71.	7.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
OAK CREEK A2	0.260	73.8	0.260	1.735	26.	212.
MIDDLE OAK CREEK	0.220	60.6	0.218	2.073	23.	252.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
OAK CREEK A3	0.206	2.069
UNNAMED STREAM C1	0.248	2.774

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEBRASKA

NAME - HARLAN COUNTY RESERVOIR (HYPEREUTROPHIC)
COUNTY - HARLAN
STORET NO. - 3102

WORKING PAPER NO. 555. NTIS ACCESSION NO. PB-258 283/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	35042.70	54.50	7.8	11.370	1.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
199.	475.	0.6	0.112	0.061	0.365	1.090

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(4/16/74) N	(6/28/74) N	(9/30/74) P AND N
27.8	**********			

SUMMARY OF PHYTOPLANKTON DATA

4/16/74 GENERA	COUNT	6/28/74 GENERA	COUNT	9/30/74 GENERA	COUNT
CYCLOTELLA	17479	MELOSIRA	1759	STEPHANODISCUS	3555
ASTERIONELLA	4211	CARTERIA	879	CYCLOTELLA	1616
FLAGELLATES	2105	APHANIZOMENON	837	FLAGELLATES	1050
DACTYLOCOCCOPSIS	979	STEPHANODISCUS	502	DACTYLOCOCCOPSIS	162
STEPHANODISCUS	832	FRAGILARIA	419	SCENEDESMUS	162
OTHER	784	OTHER	1299	OTHER	618
TOTAL	26390	TOTAL	5695	TOTAL	7163

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3190.	**********	45.	117890.	121125.
NITROGEN	9390.	**********	1600.	1033905.	1044895.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	24740.	80.	2.22
NITROGEN	349165.	67.	19.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
REPUBLICAN RIVER	10.650	31572.1	0.297	2.733	3.	29.
PRAIRIE DOG CREEK	0.500	2745.4	0.892	2.742	5.	16.
HOPE CREEK	0.030	69.9	0.632	2.555	9.	35.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
FLAG CREEK	0.516	2.501

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEBRASKA

NAME - HARRY D. STRUNK RES. (EUTROPHIC)
COUNTY - FRONTIER
STORET NO. - 3103 WORKING PAPER NO. 556. NTIS ACCESSION NO. PB-258 284/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1657.60	7.49	5.8	2.130	280.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
176.	335.	0.8	0.064	0.009	0.460	1.030

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
14.4	0.1	(4/16/74) P (7/ 1/74) NO DATA (9/27/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/16/74 GENERA	COUNT	7/ 1/74 GENERA	COUNT	9/27/74 GENERA	COUNT
ASTERIONELLA	62062	APHANIZOMENON	1596	STEPHANODISCUS	3654
CENTRIC DIATOM	4124	MELOSIRA	726	KIRCHNERIELLA	775
DACTYLOCOCCOPSIS	3921	CRYPTOMONAS	522	CRUCIGENIA	664
FLAGELLATES	2434	FRAGILARIA	319	CRYPTOMONAS	277
CRYPTOMONAS	270	SCHROEDERIA	203	SYNEDRA	277
OTHER	271	OTHER	262	OTHER	775
TOTAL	73082	TOTAL	3628	TOTAL	6422

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1320.	**********	5.	44555.	45880.
NITROGEN	3965.	**********	95.	258420.	262480.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2725.	94.	6.13
NITROGEN	112530.	57.	35.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MEDICINE CREEK	1.990	1372.7	0.405	2.925	27.	152.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
LIME CREEK	0.106	3.207
CEDAR CREEK	0.132	2.367
FOX CREEK	0.137	2.738

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEBRASKA

NAME - HUGH BUTLER RESERVOIR (EUTROPHIC)
COUNTY - FRONTIER+RED WILLOW
STORET NO. - 3104 WORKING PAPER NO. 557. NTIS ACCESSION NO. PB-258 236/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	828.80	6.59	5.9	1.400	1.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
240.	314.	0.8	0.061	0.014	0.090	0.740

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
16.6	**********	(4/16/74) N (7/ 1/74) NO DATA (9/27/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/16/74 GENERA	COUNT	7/ 1/74 GENERA	COUNT	9/27/74 GENERA	COUNT
ASTERIONELLA	14842	ANKISTRODESMUS	805	CENTRIC DIATOM	1280
CENTRIC DIATOM	7574	CRYPTOMONAS	805	FLAGELLATES	411
FLAGELLATES	4031	CARTERIA	725	CRYPTOMONAS	228
ANKISTRODESMUS	2871	DACTYLOCOCCOPSIS	322	STEPHANODISCUS	183
DACTYLOCOCCOPSIS	428	FLAGELLATES	322	OOCYSTIS	137
OTHER	1160	OTHER	1690	OTHER	548
TOTAL	30906	TOTAL	4669	TOTAL	2787

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	10.	10585.	10595.
NITROGEN	**********	**********	340.	88050.	88390.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1940.	82.	1.61
NITROGEN	48705.	45.	13.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
RED WILLOW CREEK	0.840	518.0	0.246	1.901	13.	97.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
SPRING CREEK	******	******

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEBRASKA

NAME - JOHNSON RESERVOIR (EUTROPHIC)
COUNTY - DAWSON,GOSPER
STORET NO. - 3105 WORKING PAPER NO. 558, NTIS ACCESSION NO. PB-258 294/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	**********	11.53	6.1	33.370	27.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
177.	728.	0.6	0.075	0.009	0.340	0.960

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
26.1	0.2 - 8.6 (2)	(4/16/74) P (7/ 1/74) NO DATA (9/30/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/16/74 GENERA	COUNT	7/ 1/74 GENERA	COUNT	9/30/74 GENERA	COUNT
STEPHANODISCUS	23760	FRAGILARIA	2346	MELOSIRA	2232
ASTERIONELLA	921	STEPHANODISCUS	739	STEPHANODISCUS	536
DIATOMA	614	MELOSIRA	304	APHANIZOMENON	476
CHLAMYDOMONAS	537	APHANIZOMENON	261	OSCILLATORIA	357
SUMIRELLA	499	SYNEDRA	217	ANABAENA	208
OTHER	2112	OTHER	651	OTHER	1160
TOTAL	28443	TOTAL	4518	TOTAL	4969

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	165.	77295.	77460.
NITROGEN	**********	**********	6115.	1616795.	1622910.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	52295.	32.	6.72
NITROGEN	1172080.	28.	140.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
THI COUNTY SUPPLY CANAL	33.370	**********	0.072	1.532	**********	**********

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEBRASKA

NAME - C.W. MCCONAUGHY RES. (MESO-EUTROPHIC)
COUNTY - KEITH
STORET NO. - 3106 WORKING PAPER NO. 559. NTIS ACCESSION NO. PB-258 252/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	66821.90	141.64	19.8	45.080	2.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
202.	659.	2.3	0.027	0.004	0.585	0.830

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
8.6	0.1 - 0.8 (2)	(4/16/74) P (7/ 1/74) NO DATA (9/27/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/16/74 GENERA	COUNT	7/ 1/74 GENERA	COUNT	9/27/74 GENERA	COUNT
ASTERIONELLA	5173	CRYPTOMONAS	860	CRYPTOMONAS	1023
FLAGELLATES	4362	FRAGILARIA	602	FLAGELLATES	884
CRYPTOMONAS	734	ASTERIONELLA	473	DACTYLOCOCCOPSIS	651
STEPHANODISCUS	463	FLAGELLATES	344	MELOSIRA	512
[illegible]	384	SCHROEDERIA	344	MERISMOPEDIA	419
OTHER	1120	OTHER	690	OTHER	1442
TOTAL	12238	TOTAL	3313	TOTAL	4931

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1475.	**********	45.	190890.	192410.
NITROGEN	4430.	**********	1625.	4218715.	4224770.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	38575.	80.	1.36
NITROGEN	1216105.	71.	29.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
NORTH PLATTE RIVER	40.170	65785.9	0.134	3.014	3.	58.
CLEAR CREEK	0.220	51.8	0.127	1.945	17.	256.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
GHAF CANAL	0.123	1.469

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEBRASKA

NAME - PAWNEE RESERVOIR (EUTROPHIC)
COUNTY - LANCASTER
STORET NO. - 3107 WORKING PAPER NO. 560. NTIS ACCESSION NO. PB-258 245/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	85.20	2.99	3.7	0.230	2.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
223.	384.	1.2	0.060	0.020	0.175	1.065

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
15.4	**********	(4/17/74) P AND N (7/ 2/74) NO DATA (9/26/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/17/74 GENERA	COUNT	7/ 2/74 GENERA	COUNT	9/26/74 GENERA	COUNT
DINOBRYON	849	CRYPTOMONAS	634	MELOSIRA	765
CRYPTOMONAS	310	MELOSIRA	465	APHANIZOMENON	382
ASTERIONELLA	212	FLAGELLATES	422	ANACYSTIS(MICROCYSTIS)	287
STEPHANODISCUS	147	SCHROEDERIA	338	CRYPTOMONAS	271
FLAGELLATES	82	ANABAENA	296	STEPHANODISCUS	96
OTHER	97	OTHER	634	OTHER	254
TOTAL	1697	TOTAL	2789	TOTAL	2055

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	2190.	2190.
NITROGEN	**********	**********	**********	16885.	16885.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	555.	75.	0.73
NITROGEN	5560.	67.	5.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MIDDLE CREEK	0.100	37.3	0.325	1.790	26.	160.
UNNAMED STREAM 81	0.060	23.1	0.302	1.994	26.	175.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEBRASKA

NAME - SHERMAN RESERVOIR (EUTROPHIC)
COUNTY - SHERMAN
STORET NO. - 3108 WORKING PAPER NO. 561. NTIS ACCESSION NO. PB-258 288/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	**********	11.51	7.3	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
105.	169.	1.2	0.067	0.050	0.090	0.340

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
5.7	2.0	(4/17/74) N (7/ 1/74) NO DATA (9/27/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/17/74 GENERA	COUNT	7/ 1/74 GENERA	COUNT	9/27/74 GENERA	COUNT
ASTERIONELLA	503	MERISMOPEDIA	461	STEPHANODISCUS	2198
FLAGELLATES	457	FLAGELLATES	423	FRAGILARIA	244
FRAGILARIA	183	CRYPTOMONAS	269	FLAGELLATES	153
STEPHANODISCUS	137	SCHROEDERIA	154	CYCLOTELLA	122
CYMBELLA	91	STEPHANODISCUS	154	MELOSIRA	122
OTHER	229	OTHER	76	OTHER	244
TOTAL	1600	TOTAL	1537	TOTAL	3083

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEBRASKA

NAME - SWANSON RESERVOIR (EUTROPHIC)
COUNTY - HITCHCOCK
STORET NO. - 3110 WORKING PAPER NO. 562. NTIS ACCESSION NO. PB-258 282/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	10204.60	20.13	7.3	4.170	1.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
241.	457.	0.9	0.067	0.016	0.090	0.620

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
16.4	**********	(4/15/74) N (6/28/74) NO DATA (9/27/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/15/74 GENERA	COUNT	6/28/74 GENERA	COUNT	9/27/74 GENERA	COUNT
ASTERIONELLA	15214	FLAGELLATES	413	STEPHANODISCUS	912
CYCLOTELLA	709	SCHROEDERIA	376	CRYPTOMONAS	568
FLAGELLATES	125	CRYPTOMONAS	338	OOCYSTIS	293
GLENODINIUM	83	FRAGILARIA	338	ANACYSTIS(MICROCYSTIS)	189
		STEPHANODISCUS	263	CLOSTERIUM	155
OTHER	0	OTHER	262	OTHER	636
TOTAL	16131	TOTAL	1990	TOTAL	2753

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1560.	**********	10.	15925.	17495.
NITROGEN	4540.	**********	285.	271685.	276510.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	5930.	66.	0.87
NITROGEN	138805.	50.	13.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
REPUBLICAN RIVER	4.000	9842.0	0.124	1.917	2.	25.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - LAKE ASHTABULA (EUTROPHIC)
COUNTY - BARNES,GRIGGS
STORET NO. - 3801 WORKING PAPER NO. 565. NTIS ACCESSION NO. PB-259 814/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	4946.90	21.98	4.0	3.737	304.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
260.	571.	0.7	0.260	0.170	0.160	1.640

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
40.9	12.9 - 19.6 (2)	(4/30/74) N	(7/17/74) N	(9/17/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/30/74 GENERA	COUNT	7/17/74 GENERA	COUNT	9/17/74 GENERA	COUNT
CYCLOTELLA	24617	MELOSIRA	2400	APHANIZOMENON	9136
CHROOMONAS	222	APHANIZOMENON	304	MELOSIRA	4637
CRYPTOMONAS	148	FRAGILARIA	213	ANABAENA	446
ANKISTRODESMUS	111	GLENODINIUM	182	FRAGILARIA	412
CHLAMYDOMONAS	74	CHROOMONAS	61	FLAGELLATES	343
OTHER	221	OTHER	789	OTHER	584
TOTAL	25393	TOTAL	3949	TOTAL	15558

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1975.	**********	35.	30025.	32035.
NITROGEN	5915.	**********	1065.	295885.	302865.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	25825.	19.	1.46
NITROGEN	243675.	20.	13.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SHEYENNE RIVER	2.900	3289.3	0.237	2.145	8.	69.
BALDHILL CREEK	0.410	986.3	0.167	1.846	2.	27.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - AUDUBON LAKE (EUTROPHIC)
COUNTY - MCLEAN
STORET NO. - 3802 WORKING PAPER NO. 566. NTIS ACCESSION NO. PB-260 891/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	**********	48.56	******	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
400.	1211.	1.4	0.087	0.015	0.220	1.795

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
11.3	5.9	(4/26/74) N	(7/18/74) N	(9/13/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/26/74 GENERA	COUNT	7/18/74 GENERA	COUNT	9/13/74 GENERA	COUNT
CENTRIC DIATOM	2039	APHANIZOMENON	579	APHANIZOMENON	5350
CHLAMYDOMONAS	1497	OSCILLATORIA	83	CHROOMONAS	132
CHROOMONAS	542				
CRYPTOMONAS	181				
CHLOROPHYTAN COLONIES	129				
OTHER	179	OTHER	0	OTHER	0
TOTAL	4567	TOTAL	662	TOTAL	5482

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - BRUSH LAKE (EUTROPHIC)
COUNTY - MCLEAN
STORET NO. - 3803 WORKING PAPER NO. 567. NTIS ACCESSION NO. PB-262 871/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	0.81	2.5	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
408.	856.	1.3	0.066	0.010	0.095	1.810

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
29.1	••••••••••	(4/26/74) P	(7/16/74) N	(9/13/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/26/74 GENERA	COUNT	7/16/74 GENERA	COUNT	9/13/74 GENERA	COUNT
CRYPTOMONAS	711	MELOSIRA	6944	ANACYSTIS(MICROCYSTIS)	3680
CHROOMONAS	561	FRAGILARIA	807	FRAGILARIA	1968
ELAKATOTHRIX	75	ANABAENA	431	OOCYSTIS	548
ASTERIONELLA	75	CHROOMONAS	323	CHROOMONAS	255
SYNURA	37	SCHROEDERIA	269	CRYPTOMONAS	218
OTHER	0	OTHER	377	OTHER	546
TOTAL	1459	TOTAL	9151	TOTAL	7215

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - LAKE DARLING (EUTROPHIC)
COUNTY - RENVILLE,WARD
STORET NO. - 3806

WORKING PAPER NO. 568. NTIS ACCESSION NO. PB-261 595/AH

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	8417.50	40.06	3.4	3.274	1.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
210.	540.	0.8	0.274	0.180	0.250	1.560

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
60.1	11.5 - 16.1 (2)	(4/30/74) N	(7/17/74) N	(9/13/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/30/74 GENERA	COUNT	7/17/74 GENERA	COUNT	9/13/74 GENERA	COUNT
CYCLOTELLA	9068	APHANIZOMENON	3959	APHANIZOMENON	13938
CHROOMONAS	585	PHORMIDIUM	2672	ANABAENA	691
CRYPTOMONAS	553	CHROOCUCCUS	891	STEPHANODISCUS	479
CHLAMYDOMONAS	488	CHROOMONAS	247	CHROOMONAS	266
STEPHANODISCUS	130	FLAGELLATES	148	ANACYSTIS(MICROCYSTIS)	53
OTHER	259	OTHER	100	OTHER	48
TOTAL	11083	TOTAL	8017	TOTAL	15475

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	19090.	19090.
NITROGEN	**********	**********	**********	245400.	245400.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	10720.	44.	0.48
NITROGEN	163400.	33.	6.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SOUNIS RIVER	3.080	7873.6	0.162	1.849	2.	24.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
MACKOBEE COULEE	0.163	2.505

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - DEVILS LAKE (EUTROPHIC)
COUNTY - BENSON,RAMSEY
STORET NO. - 3805 WORKING PAPER NO. 569. NTIS ACCESSION NO. PB-260 892/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	48.00	2.6	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
448.	3685.	1.3	0.630	0.469	0.140	3.000

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
38.5	15.3	(4/29/74) N	(7/16/74) N	(9/16/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/29/74 GENERA	COUNT	7/16/74 GENERA	COUNT	9/16/74 GENERA	COUNT
FLAGELLATES	1004	STEPHANODISCUS	748	APHANIZOMENON	6330
DACTYLOCOCCOPSIS	521	APHANIZOMENON	721	ANACYSTIS(MICROCYSTIS)	245
LUNATE CELLS	409	ANACYSTIS(MICROCYSTIS)	480	SCHROEDERIA	70
CHROOMONAS	186	PHORMIDIUM	27	OOCYSTIS	35
CRYPTOMONAS	112	SCHROEDERIA	27	STEPHANODISCUS	35
OTHER	446	OTHER	81	OTHER	0
TOTAL	2678	TOTAL	2084	TOTAL	6715

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - JAMESTOWN RESERVOIR (EUTROPHIC)
COUNTY - STUTSMAN
STORET NO. - 3806 WORKING PAPER NO. 570. NTIS ACCESSION NO. PB-261 594/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	1942.50	4.86	7.5	0.740	1.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
226.	485.	1.6	0.144	0.078	0.365	1.425

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
19.4	4.4	(4/26/74) P AND N (7/17/74) N (9/17/74) P AND N

SUMMARY OF PHYTOPLANKTON DATA

4/26/74 GENERA	COUNT	7/17/74 GENERA	COUNT	9/17/74 GENERA	COUNT
CYCLOTELLA	7179	MELOSIRA	4335	CRYPTOMONAS	680
CHROOMONAS	1341	CHROOMONAS	567	CRUCIGENIA	486
ANKISTRODESMUS	1262	SCHROEDERIA	500	APHANIZOMENON	340
SCENEDESMUS	316	CHROOCOCCUS	133	COCCOID CELLS	291
CRUCIGENIA	237	CRYPTOMONAS	133	ANACYSTIS(MICROCYSTIS)	146
OTHER	2287	OTHER	568	OTHER	1067
TOTAL	12622	TOTAL	6236	TOTAL	3010

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	15.	4475.	4490.
NITROGEN	**********	**********	640.	49830.	50470.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	4570.	LOSS	0.92
NITROGEN	34875.	31.	10.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
JAMES RIVER	0.540	1776.7	0.252	2.752	2.	23.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED CREEK M1	0.231	2.455

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - LAKE LAMOURE (EUTROPHIC)
COUNTY - LAMOURE
STORET NO. - 3807 WORKING PAPER NO. 571. NTIS ACCESSION NO. PB-262 872/AH

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	357.40	2.00	5.0	0.182	1.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
269.	608.	2.0	0.438	0.290	0.380	2.090

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
19.7	18.5	(4/29/74) N	(7/10/74) N	(9/17/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/29/74 GENERA	COUNT	7/10/74 GENERA	COUNT	9/17/74 GENERA	COUNT
CYCLOTELLA	5208	RHODOMONAS	1772	APHANIZOMENON	2402
ANKISTRODESMUS	2559	CRYPTOMONAS	405	CHROOMONAS	129
SYNEDRA	1596	APHANIZOMENON	394	CRYPTOMONAS	43
CHROOMONAS	853	ANABAENA	101		
CRYPTOMONAS	539	ANKISTRODESMUS	51		
OTHER	1055	OTHER	152	OTHER	0
TOTAL	11808	TOTAL	2835	TOTAL	2574

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	2690.	2690.
NITROGEN	**********	**********	**********	10345.	10345.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1589.	41.	1.34
NITROGEN	9040.	13.	5.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
COTTONWOOD CREEK	0.170	334.1	0.569	2.717	7.	23.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - MATEJCEK LAKE (EUTROPHIC)
COUNTY - WALSH
STORET NO. - 3808 WORKING PAPER NO. 572. NTIS ACCESSION NO. PB-261 598/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	227.90	0.53	4.2	0.107	236.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
169.	398.	0.6	0.228	0.179	0.440	1.360

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
2.7	11.2	(4/29/74) N	(7/16/74) N	(9/16/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/29/74 GENERA	COUNT	7/16/74 GENERA	COUNT	9/16/74 GENERA	COUNT
CRYPTOMONAS	116	SCENEDESMUS	18	FLAGELLATES	135
CHLAMYDOMONAS	93	SPHAEROCYSTIS	18	CRYPTOMONAS	68
GYMNODINIUM	47	APHANIZOMENON	18	APHANIZOMENON	68
ANKISTRODESMUS	23				
OTHER	0	OTHER	0	OTHER	0
TOTAL	279	TOTAL	54	TOTAL	271

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	800.	800.
NITROGEN	••••••••••	••••••••••	••••••••••	7450.	7450.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	510.	36.	1.51
NITROGEN	7320.	2.	14.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MIDDLE RR. FOREST RIVER	0.080	176.1	0.234	2.039	3.	30.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED CREEK R1	0.122	2.987

100

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - LAKE METIGOSHE (MESOTHOPHIC)
COUNTY - BOTTINEAU
STORET NO. - 3809 WORKING PAPER NO. 573. NTIS ACCESSION NO. PB-259 774/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	3.74	2.8	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
268.	500.	2.8	0.032	0.010	0.080	1.240

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
10.4	••••••••••	(7/17/74) N	(9/13/74) N

SUMMARY OF PHYTOPLANKTON DATA

7/17/74 GENERA	COUNT	9/13/74 GENERA	COUNT
FRAGILARIA	797	MELOSIRA	489
CRYPTOMONAS	258	CRYPTOMONAS	245
CHROOMONAS	129	TETRAEDRON	245
SCENEDESMUS	108	DINOBRYON	153
DINOBRYON	86	MELOSIRA	92
OTHER	497	OTHER	856
TOTAL	1875	TOTAL	2080

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITHOGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITHOGEN	••••••••••	•••••	••••••••••

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - PELICAN LAKE (MESO-EUTROPHIC)
COUNTY - ROTTINEAU
STORET NO. - 3811 WORKING PAPER NO. 570. NTIS ACCESSION NO. PB-259 772/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	0.50	3.1	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
288.	438.	3.4	0.034	0.006	0.070	1.330

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
11.8	2.6	(7/17/74) N	(9/13/74) N

SUMMARY OF PHYTOPLANKTON DATA

7/17/74 GENERA	COUNT	9/13/74 GENERA	COUNT
FRAGILARIA	883	FRAGILARIA	2526
CRYPTOMONAS	321	ANACYSTIS(MICROCYSTIS)	458
OSCILLATORIA	321	APHANIZOMENON	173
ANACYSTIS(MICROCYSTIS)	120	ANABAENA	104
NITZSCHIA	48	CRYPTOMONAS	104
OTHER	0	OTHER	311
TOTAL	1695	TOTAL	3868

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	•••••-••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - LAKE SAKAKAWEA (OLIGOTROPHIC-EUTROPHIC)
COUNTY - DUNN,MCKENZIE,MCLEAN,MERCER,MOUNTRAIL,WILLIAMS
STORET NO. - 3812 WORKING PAPER NO. 575. NTIS ACCESSION NO. PB-261 571/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	669825.00	1490.21	18.9	652.930	1.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
167.	549.	2.3	0.016	0.007	0.150	0.330

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
5.9	0.1 - 0.3 (2)	(6/30/74) P AND N (7/18/74) P AND N (9/17/74) P AND N

SUMMARY OF PHYTOPLANKTON DATA

6/30/74 GENERA	COUNT	7/18/74 GENERA	COUNT	9/17/74 GENERA	COUNT
STEPHANODISCUS	867	MELOSIRA	370	FLAGELLATES	786
FLAGELLATES	785	SYNEDRA	370	OSCILLATORIA	337
PENNATE DIATOMS	321	CENTRIC DIATOM	301	STEPHANODISCUS	262
ASTERIONELLA	250	OSCILLATORIA	75	CRYPTOMONAS	187
CRYPTOMONAS	178	FLAGELLATES	75	PENNATE DIATOMS	112
OTHER	608	OTHER	226	OTHER	226
TOTAL	2999	TOTAL	1429	TOTAL	1910

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	17055.	**********	10.	6080100.	6097765.
NITROGEN	52950.	**********	455.	28083775.	28137180.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	662250.	93.	4.49
NITROGEN	10446205.	63.	18.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MISSOURI RIVER	276.000	238383.5	0.201	0.991	7.	38.
LITTLE MISSOURI RIVER	17.260	21522.9	0.177	1.474	4.	44.
CHERRY CREEK	0.410	761.9	0.254	1.051	4.	30.
YELLOWSTONE RIVER	341.190	180730.1	0.507	1.458	29.	84.
LITTLE MUDDY RIVER	0.910	2007.2	0.167	2.143	2.	32.
MOCCASIN CREEK NR	0.030	57.0	0.161	1.048	20.	104.
CLARKS CREEK	0.040	188.2	0.118	1.473	2.	17.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
BEAR DEN CREEK	0.208	1.675
TOBACCO GARDEN CREEK	0.186	1.372

WHITE RABBIT RIVER	0.220	2.142
LITTLE KNIFE RIVER	0.241	2.138
SHELL CREEK	0.195	2.393
MIDDLE DOUGLAS CREEK	0.196	2.355
MALMOURIE CREEK	0.086	1.211
UNNAMED CREEK N-1	0.122	1.995
UNNAMED CREEK W-1	0.450	2.882
MOCCASIN CREEK N-1	0.167	1.916

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - SPIRITWOOD LAKE (EUTROPHIC)
COUNTY - STUTSMAN
STORET NO. - 3813 WORKING PAPER NO. 576. NTIS ACCESSION NO. PB-259 775/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	1.67	8.8	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
376.	2325.	2.1	0.156	0.082	0.290	2.540

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
34.7	9.8 - 15.9 (2)	(4/26/74) N	(7/17/74) N	(9/17/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/26/74 GENERA	COUNT	7/17/74 GENERA	COUNT	9/17/74 GENERA	COUNT
CHLAMYDOMONAS	3728	APHANIZOMENON	10245	CHROOMONAS	376
MELOSIRA	1869	ANACYSTIS(MICROCYSTIS)	162	STEPHANODISCUS	226
CHROOMONAS	353	LYNGBYA	40	CRYPTOMONAS	150
DACTYLOCOCCOPSIS	176			APHANIZOMENON	113
FLAGELLATES	175			ANACYSTIS(MICROCYSTIS)	75
OTHER	670	OTHER	0	OTHER	0
TOTAL	6982	TOTAL	10447	TOTAL	940

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - SWEET BRIAR LAKE (EUTROPHIC)
COUNTY - MORTON
STORET NO. - 3814

WORKING PAPER NO. 577. NTIS ACCESSION NO. PB-261 570/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	393.70	1.10	2.9	0.232	183.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
280.	579.	1.5	0.092	0.031	0.090	1.320

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(4/30/74) N	(7/16/74) N	(9/17/74) N
39.0	15.8			

SUMMARY OF PHYTOPLANKTON DATA

7/16/74 GENERA	COUNT	9/17/74 GENERA	COUNT
APHANIZOMENON	3415	APHANIZOMENON	3997
CHROOMONAS	556	CHROOMONAS	735
CRYPTOMONAS	357	GLOEOTHICHIA	92
ANKISTRODESMUS	79	SCHROEDERIA	46
		COELOSPHAERIUM	46
OTHER	0	OTHER	0
TOTAL	4407	TOTAL	4916

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	10.	1875.	1885.
NITROGEN	**********	**********	420.	23010.	23430.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1030.	45.	1.71
NITROGEN	12265.	48.	21.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SWEET BRIAR CREEK	0.210	277.1	0.109	1.597	5.	52.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED CREEK A1	0.457	4.470
UNNAMED CREEK C1	0.315	2.817

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NORTH DAKOTA

NAME - WHITMAN LAKE (EUTROPHIC)
COUNTY - NELSON,WALSH
STORET NO. - 3815 WORKING PAPER NO. 578. NTIS ACCESSION NO. PB-260 809/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	111.40	0.58	2.7	0.081	255.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
182.	406.	0.5	0.260	0.185	0.260	1.320

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
27.1	3.6 - 28.8 (2)	(4/29/74) N	(7/16/74) N	(9/16/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/29/74 GENERA	COUNT	7/16/74 GENERA	COUNT	9/16/74 GENERA	COUNT
CHLAMYDOMONAS	163	ANABAENA	1006	APHANIZOMENON	9542
CRYPTOMONAS	122	APHANIZOMENON	931	ANABAENA	585
MELOSIRA	82	CRYPTOMONAS	782	OOCYSTIS	410
NITZSCHIA	82	TRACHELOMONAS	261	DACTYLOCOCCOPSIS	176
STEPHANODISCUS	82	SCHROEDERIA	186	STEPHANODISCUS	176
OTHER	203	OTHER	1156	OTHER	468
TOTAL	734	TOTAL	4322	TOTAL	11357

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	5.	475.	480.
NITROGEN	**********	**********	105.	5235.	5340.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	520.	LOSS	0.83
NITROGEN	5340.	0.	9.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MIDDLE BR. FOREST RIVER	0.070	101.0	0.183	1.800	4.	42.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN OKLAHOMA

NAME - ALTUS RESERVOIR (EUTROPHIC)
COUNTY - GREER, OKLA
STORET NO. - 4001 WORKING PAPER NO. 581. NTIS ACCESSION NO. PB-269 537/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	5480.40	25.41	6.4	4.090	2.1

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
143.	2019.	0.8	0.041	0.010	0.060	0.630

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
14.8	0.5 - 4.0 (2)	(3/29/74) N	(6/10/74) N	(10/24/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/29/74 GENERA	COUNT	6/10/74 GENERA	COUNT	10/24/74 GENERA	COUNT
OSCILLATORIA	7319	OSCILLATORIA	1330	NAVICULA	4928
CHROOMONAS	232	CHROOMONAS	272	OSCILLATORIA	1437
CARTERIA	155	CARTERIA	242	CENTRIC DIATOM	667
DACTYLOCOCCOPSIS	77	ANACYSTIS(MICROCYSTIS)	242	CRYPTOMONAS	205
STEPHANODISCUS	77	MERISMOPEDIA	212	LYNGBYA	205
OTHER	117	OTHER	664	OTHER	309
TOTAL	7977	TOTAL	2962	TOTAL	7751

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	5.	10700.	10705.
NITROGEN	**********	**********	120.	902625.	902745.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3910.	63.	0.42
NITROGEN	96825.	89.	35.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
NORTH FORK RED RIVER	3.820	5185.2	0.088	1.894	2.	165.
LAKE CREEK	0.110	107.0	0.086	2.292	3.	76.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED STREAM C1	0.208	2.704

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN OKLAHOMA

NAME - ARBUCKLE LAKE (MESOTROPHIC)
COUNTY - MURRAY
STORET NO. - 4002 WORKING PAPER NO. 582. NTIS ACCESSION NO. PB-268 295/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	326.30	9.51	9.4	1.340	3.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
158.	379.	1.4	0.020	0.008	0.070	0.440

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
7.0	0.2 - 0.3 (2)	(3/30/74) N	(6/12/74) P	(10/23/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/30/74 GENERA	COUNT	6/12/74 GENERA	COUNT	10/23/74 GENERA	COUNT
MELOSIRA	11759	MELOSIRA	478	MELOSIRA	196
CHROOMONAS	450	PEDIASTRUM	191	OOCYSTIS	164
CYCLOTELLA	450	CRYPTOMONAS	143	SCENEDESMUS	146
CRYPTOMONAS	250	ANABAENA	95	ANABAENA	98
SCENEDESMUS	200	MOUGEOTIA	95	CHROOMONAS	98
OTHER	451	OTHER	287	OTHER	558
TOTAL	13560	TOTAL	1289	TOTAL	1260

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	3810.	3810.
NITROGEN	**********	**********	**********	61220.	61220.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	885.	77.	0.40
NITROGEN	28905.	53.	6.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ROCK CREEK	0.420	101.8	0.095	0.944	11.	123.
GUY SANDY CREEK	0.360	89.1	0.095	1.501	12.	179.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
BUCKHORN CREEK	0.106	1.403

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN OKLAHOMA

NAME - LAKE ELSWORTH (EUTHOPHIC)
COUNTY - CADDO, COMANCHE
STORET NO. - 4003 WORKING PAPER NO. 583. NTIS ACCESSION NO. PB-268 381/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	642.30	22.66	5.1	4.260	1.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
150.	367.	1.0	0.037	0.009	0.070	0.620

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(4/ 1/74) N	(6/10/74) P	(10/24/74) N
8.4	0.1			

SUMMARY OF PHYTOPLANKTON DATA

4/ 1/74 GENERA	COUNT	6/10/74 GENERA	COUNT	10/24/74 GENERA	COUNT
CHROOMONAS	2532	CARTERIA	1805	CARTERIA	1352
CRYPTOMONAS	1080	CHLAMYDOMONAS	790	MELOSIRA	230
ANKISTRODESMUS	675	CRYPTOMONAS	564	STEPHANODISCUS	201
SYNEDRA	405	STEPHANODISCUS	489	CHROOMONAS	115
MELOSIRA	338	ANKISTRODESMUS	188	OOCYSTIS	86
OTHER	101	OTHER	977	OTHER	144
TOTAL	5131	TOTAL	4813	TOTAL	2128

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1980.	••••••••••	5.	3510.	5495.
NITROGEN	4480.	••••••••••	160.	158970.	163610.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	4665.	15.	0.24
NITROGEN	89635.	45.	7.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
EAST CACHE CREEK	1.020	144.2	0.044	0.967	8.	210.
CHANDLER CREEK	0.150	26.9	0.039	1.020	3.	183.
MISSION CREEK	0.230	40.9	0.035	1.627	6.	255.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
TAHOE CREEK	0.196	3.505

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN OKLAHOMA

NAME - LAKE EUFAULA (EUTROPHIC)
COUNTY - HASKELL, MCINTOSH, OKMULGEE, PITTSBURG
STORET NO. - 4004 WORKING PAPER NO. 584, NTIS ACCESSION NO. PB-269 540/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	97958.90	414.81	10.1	181.730	309.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
88.	382.	0.4	0.081	0.029	0.405	0.810

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
		(4/ 1/74)	(6/13/74)	(8/28/74)	(10/22/74)
4.4	1.1 - 13.2 (2)	N	N	N	N

SUMMARY OF PHYTOPLANKTON DATA

4/ 1/74 GENERA	COUNT	6/13/74 GENERA	COUNT	8/28/74 GENERA	COUNT	10/22/74 GENERA	COUNT
CHROOMONAS	355	CHROOMONAS	351	MELOSIRA	1097	CHROOMONAS	817
SCENEDESMUS	355	STEPHANODISCUS	292	STEPHANODISCUS	240	CHLAMYDOMONAS	371
CYCLOTELLA	133	CRYPTOMONAS	263	CHROOMONAS	206	CENTRIC DIATOM	297
ANKISTRODESMUS	89	CHLAMYDOMONAS	88	ANABAENA	69	CRYPTOMONAS	223
SKELETONEMA	89	CARTERIA	58	SCHROEDERIA	69	MELOSIRA	99
OTHER	532	OTHER	321	OTHER	306	OTHER	49
TOTAL	1553	TOTAL	1373	TOTAL	1987	TOTAL	1856

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	429755.	**********	10.	1297140.	1726905.
NITROGEN	868285.	**********	270.	10349635.	11218190.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1084280.	37.	4.16
NITROGEN	10392320.	7.	27.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CANADIAN RIVER	51.100	5996l.1	0.378	2.781	5.	70.
GAINES CREEK	3.180	336.7	0.054	0.786	15.	256.
NORTH CANADIAN RIVER	20.210	24322.7	0.976	3.270	26.	89.
DEEP FORK	23.170	5327.6	0.321	2.143	40.	284.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
LONGTOWN CREEK	0.025	0.909
BRUSHY CREEK *	0.245	1.207
COAL CREEK *	0.104	1.538
MILL CREEK	0.040	1.694

* REFLOW POINT SOURCE.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN OKLAHOMA

NAME - FORT COBB RESERVOIR (EUTROPHIC)
COUNTY - CADDO
STORET NO. - 4005

WORKING PAPER NO. 585. NTIS ACCESSION NO. PB-269 584/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	787.40	16.47	6.4	1.230	7.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
157.	450.	1.1	0.038	0.012	0.110	0.760

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
15.0	0.1 - 3.2 (2)	(4/ 1/74) N	(6/11/74) N	(10/24/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/ 1/74 GENERA	COUNT	6/11/74 GENERA	COUNT	10/24/74 GENERA	COUNT
CENTRIC DIATOM	2443	CARTERIA	1138	CHROOMONAS	268
CHROOMONAS	1800	CHROOMONAS	793	COSCINODISCUS	268
CRYPTOMONAS	193	CRYPTOMONAS	758	OSCILLATORIA	246
DINOHRYON	161	STEPHANODISCUS	552	ANABAENA	112
ANKISTRODESMUS	129	MELOSIRA	344	COELOSPHAERIUM	112
OTHER	353	OTHER	1448	OTHER	379
TOTAL	5079	TOTAL	5033	TOTAL	1385

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	260.	**********	5.	9105.	9370.
NITROGEN	775.	**********	115.	105525.	106415.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	590.	94.	0.57
NITROGEN	16100.	85.	6.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
COBB CREEK	0.570	341.9	0.223	2.448	12.	126.
SPRING CREEK	0.210	134.7	0.223	1.983	10.	103.
WILLOW CREEK	0.070	42.7	0.268	2.114	14.	110.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN OKLAHOMA

NAME - FORT SUPPLY RESERVOIR (EUTROPHIC)
COUNTY - WOODWARD
STORET NO. - 4006 WORKING PAPER NO. 586. NTIS ACCESSION NO. PB-268 378/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	3869.50	7.61	11.9	2.310	1.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
184.	797.	0.4	0.070	0.014	0.135	0.690

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
9.7	**********	(3/29/74) N	(6/10/74) N	(10/24/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/29/74 GENERA	COUNT	6/10/74 GENERA	COUNT	10/24/74 GENERA	COUNT
KIRCHNERIELLA	3098	OOCYSTIS	682	STEPHANODISCUS	557
ANACYSTIS(MICROCYSTIS)	634	CHLAMYDOMONAS	243	ANACYSTIS(MICROCYSTIS)	381
OOCYSTIS	493	CHROOMONAS	195	CHLAMYDOMONAS	352
OSCILLATORIA	422	STEPHANODISCUS	195	OOCYSTIS	352
CHROOMONAS	352	ANKISTRODESMUS	146	CHROOMONAS	264
OTHER	1197	OTHER	243	OTHER	588
TOTAL	6196	TOTAL	1704	TOTAL	2494

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	988.	**********	5.	2335.	3328.
NITROGEN	2930.	**********	105.	49440.	52475.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2670.	20.	0.44
NITROGEN	60715.	LOSS	6.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WOLF CREEK	2.120	3589.7	0.038	0.837	0.5	9.
BOGGY CREEK	0.090	138.6	0.063	1.583	2.*	32.*
UNNAMED CREEK	0.020	23.6	0.060	1.704	1.	36.
EIGHTMILE CREEK	0.020	33.9	0.082	1.473	1.	29.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
TURKEY CREEK	0.077	1.736
TWENTYMILE CREEK	0.092	1.071

* ESTIMATED

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN OKLAHOMA

NAME - FOSS RESERVOIR (EUTROPHIC)
COUNTY - CUSTER
STORET NO. - 4007

WORKING PAPER NO. 587. NTIS ACCESSION NO. PB-269 479/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	3859.10	35.61	8.9	2.890	43.7

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
151.	1879.	0.9	0.027	0.006	0.090	0.700

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
4.9	0.1 - 0.2 (2)	(3/29/74) N	(6/10/74) P	(10/24/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/29/74 COUNT	GENERA	6/10/74 COUNT	GENERA	10/24/74 COUNT	GENERA	COUNT
1029	DACTYLOCOCCOPSIS	555	OSCILLATORIA	555	OSCILLATORIA	2864
676	SYNEDRA	149	ANKISTRODESMUS	149	COCYSTIS	92
412	OSCILLATORIA	85	MERISMOPEDIA	85	RAPHIDIOPSIS	69
235	ANKISTRODESMUS	64	CHROOMONAS	64	TETRAEDRON	69
147	NAVICULA	64	MOUGEOTIA	64	ANKISTRODESMUS	23
295	OTHER	321	OTHER	321	OTHER	116
2794	TOTAL	1238	TOTAL	1238	TOTAL	3233

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	370.	**********	5.	9300.	9675.
NITROGEN	1105.	**********	160.	193865.	195130.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	0.27
NITROGEN	**********	*****	5.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WASHITA RIVER	2.190	3120.9	0.109	1.653	2.	38.
QUARTERMASTER CREEK	0.430	455.6	0.084	1.675	4.	53.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
PANTHER CREEK	0.230	1.830
WILD HORSE CREEK	0.075	2.849

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN OKLAHOMA

NAME - LAKE FRANCES
COUNTY - ADAIR
STORET NO. - 4008

(EUTROPHIC)

WORKING PAPER NO. 588. NTIS ACCESSION NO. PB-268 267/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1644.60	2.31	1.8	16.470	3.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
99.	189.	0.4	0.142	0.093	1.780	2.135

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
8.0	22.1 - 31.5 (2)	(4/ 3/74) N	(6/14/74) P	(10/18/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/ 3/74 GENERA	COUNT	6/14/74 GENERA	COUNT	10/18/74 GENERA	COUNT
SYNEDRA	476	MELOSIRA	103	CYCLOTELLA	1745
CENTRIC DIATOM	449	CRYPTOMONAS	62	SKELETONEMA	1325
CHROOMONAS	264	ANABAENA	41	CRYPTOMONAS	517
ASTERIONELLA	211	APHANIZOMENON	21	MELOSIRA	420
MELOSIRA	185	ASTERIONELLA	21	NITZSCHIA	259
OTHER	424	OTHER	0	OTHER	420
TOTAL	2009	TOTAL	248	TOTAL	4686

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	595.	**********	**********	84185.	84780.
NITROGEN	1785.	**********	**********	1326215.	1328000.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	66540.	22.	36.70
NITROGEN	1069760.	19.	574.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ILLINOIS RIVER	13.540	1352.9	0.179	2.603	56.	831.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
BALLARD CREEK	0.092	2.169

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN OKLAHOMA

NAME - GRAND LK O' THE CHEROKEES (EUTHOPHIC)
COUNTY - MAYES, DELAWARE, CRAIG, OTTOWA
STORET NO. - 4009 WORKING PAPER NO. 589. NTIS ACCESSION NO. PB-268 266/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	26671.90	188.18	10.9	194.680	129.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
97.	251.	0.8	0.087	0.038	0.740	1.130

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
		(4/ 2/74) P	(6/17/74) P	(8/29/74) P	(10/21/74) P
6.8	2.8 - 0.2 (3)				

SUMMARY OF PHYTOPLANKTON DATA

4/ 2/74		6/14/74		8/29/74		10/21/74		
GENERA	COUNT	GENERA	COUNT	GENERA	COUNT	GENERA	COUNT	COUNT
CHROOMONAS	306	STEPHANODISCUS	1387	OSCILLATORIA	1430	MELOSIRA	413	
CENTRIC DIATOM	279	MELOSIRA	1060	MELOSIRA	786	CHROOMONAS	275	
MELOSIRA	223	CHLAMYDOMONAS	231	CHROOMONAS	286	FLAGELLATES	184	
SCENEDESMUS	112	NITZSCHIA	110	SKELETONEMA	191	ANKISTRODESMUS	46	
MICRACTINIUM	111	CHROOMONAS	92	ANKISTRODESMUS	167	CRYPTOMONAS	46	
OTHER	139	OTHER	648	OTHER	929	OTHER	344	
TOTAL	1170	TOTAL	3514	TOTAL	3789	TOTAL	1308	

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

a. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	34698.	12585.	68.	1250605.	1297850.
NITROGEN	95125.	4825.	2339.	13481690.	13583179.

b. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	684480.	47.	6.90
NITROGEN	10157189.	25.	72.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
NEOSHO RIVER	180.550	15218.6	0.249	1.975	53.	437.
HORSE CREEK	0.660	64.5	0.455	2.577	77.	595.
TAR CREEK	0.550	88.4	1.519	5.484	170.	680.
SPRING RIVER	51.810	6882.2	0.248	2.956	55.	711.
LOST CREEK	1.650	213.4	0.042	1.658	10.*	375.*
BUFFALO CREEK	1.900	259.3	0.027	1.334	6.	325.
ELK RIVER	21.360	2258.3	0.039	1.374	12.	439.
HONEY CREEK	0.880	124.1	0.050	1.639	11.	304.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNEECHEE CREEK	0.117	1.181

SYCAMORE CREEK	0.030	2.24*

* ESTIMATED

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN OKLAHOMA

NAME - LAKE HEFNER (EUTHOPHIC)
COUNTY - OKLAHOMA
STORET NO. - 4010

WORKING PAPER NO. 590. NTIS ACCESSION NO. PB-269 265/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	25.18	15.12	9.1	1.520	2.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
140.	811.	1.0	0.057	0.036	0.250	0.710

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
5.7	3.0 - 5.0 (2)	(3/29/74) N	(6/11/74) N	(10/24/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/29/74 GENERA	COUNT	6/11/74 GENERA	COUNT	10/24/74 GENERA	COUNT
CYCLOTELLA	74	CHROOMONAS	587	CHROOMONAS	556
OOCYSTIS	55	ANACYSTIS(MICROCYSTIS)	434	COELOSPHAERIUM	75
CHROOMONAS	18	ANABAENA	181	STEPHANODISCUS	68
CYCLOTELLA	18	OOCYSTIS	181	DACTYLOCOCCOPSIS	31
NITZSCHIA	18	SCHROEDERIA	72	TETRASTRUM	25
OTHER	0	OTHER	147	OTHER	102
TOTAL	183	TOTAL	1522	TOTAL	857

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	4535.	4535.
NITROGEN	**********	**********	**********	61470.	61470.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	950.	79.	0.45
NITROGEN	54640.	11.	6.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BLUFF CREEK CANAL	1.440	**********	0.121	1.796	**********	**********

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED CREEK C1	0.089	1.205
CHISHOLM CREEK	0.073	6.320

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN OKLAHOMA

NAME - KEYSTONE RESERVOIR (EUTROPHIC)
COUNTY - TULSA, OSAGE, CREEK, PAWNEE
STORET NO. - 4011 WORKING PAPER NO. 591. NTIS ACCESSION NO. PB-269 478/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	162673.40	106.43	7.7	179.730	55.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
114.	1293.	0.4	0.136	0.096	0.690	1.200

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
21.4	4.9 - 17.9 (4)	(4/ 2/74) N	(6/12/74) N	(8/29/74) N	(10/23/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/ 2/74 GENERA	COUNT	6/12/74 GENERA	COUNT	8/29/74 GENERA	COUNT	10/23/74 GENERA	COUNT
CENTRIC DIATOM	2146	CHROOMONAS	344	CENTHIC DIATOM	1086	SKELETONEMA	4551
CHROOMONAS	503	CRYPTOMONAS	238	CHRYSOPHYTAN CELLS	126	CHLAMYDOMONAS	3519
CHRYSOPHYTAN CELLS	450	CYCLOTELLA	106	NAVICULA	51	CYCLOTELLA	2874
ANKISTRODESMUS	265	CHLAMYDOMONAS	53	CHLAMYDOMONAS	51	ANKISTRODESMUS	461
NITZSCHIA	264	SKELETONEMA	53	CHROOMONAS	25	CHRYSOPHYTAN CELLS	295
OTHER	797	OTHER	0	OTHER	303	OTHER	1234
TOTAL	4425	TOTAL	794	TOTAL	1642	TOTAL	12934

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	22765.	**********	10.	1731070.	1753845.
NITROGEN	63960.	**********	395.	14225225.	14289580.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	785740.	55.	16.48
NITROGEN	8746810.	39.	134.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ARKANSAS RIVER	130.400	123524.8	0.356	2.759	11.	92.
HELLROARING CREEK	0.080	27.7	0.042	1.250	4.	126.
CIMARRON RIVER	34.370	34900.2	0.365	2.077	11.	63.
LAGOON CREEK	0.450	123.3	0.075	1.312	8.	158.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
RANCH CREEK	0.069	1.345
SALT CREEK	0.080	1.068
COUNCIL CREEK	0.071	1.182
TIGER CREEK *	0.397	1.672
EUCHEE CREEK *	0.160	1.253

SKULL CREEK *	0.142	8.059

* AFLOW POINT SOURCE.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN OKLAHOMA

NAME - OOLOGAH RESERVOIR (EUTROPHIC)
COUNTY - NOWATA, ROGERS
STORET NO. - 4012 WORKING PAPER NO. 592. NTIS ACCESSION NO. PB-268 375/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	11237.70	119.22	5.7	71.740	109.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
109.	301.	0.4	0.059	0.031	0.580	0.940

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
		4/ 2/74	6/13/74	8/29/74	10/21/74
5.1	1.8 - 13.4 (3)	(4/ 2/74) P	(6/13/74) P	(8/29/74) P	(10/21/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/ 2/74 GENERA	COUNT	6/13/74 GENERA	COUNT	8/28/74 GENERA	COUNT	10/21/74 GENERA	COUNT
CHROOMONAS	494	MELOSIRA	86	MELOSIRA	567	CHROOMONAS	3783
CRYPTOMONAS	380	NITZSCHIA	86	CRYPTOMONAS	177	CYCLOTELLA	408
MELOSIRA	228	SCENEDESMUS	29	STEPHANODISCUS	142	CRYPTOMONAS	190
DACTYLOCOCCOPSIS	76			CHROOMONAS	71	MELOSIRA	163
SKELETONEMA	76			SKELETONEMA	71	SKELETONEMA	163
OTHER	39	OTHER	0	OTHER	142	OTHER	327
TOTAL	1293	TOTAL	201	TOTAL	1170	TOTAL	5034

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	8330.	••••••••••	15.	403115.	411460.
NITROGEN	19695.	••••••••••	515.	4217805.	4238215.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	159885.	61.	3.45
NITROGEN	3743220.	12.	35.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
VERDIGRIS RIVER	62.500	9585.6	0.200	1.960	41.	396.
*ULF CREEK	1.330	238.0	0.044	1.165	8.	194.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
PANTHER CREEK	0.056	1.328
BRUSH CREEK	0.044	1.296
BIG CREEK	0.083	1.416
EAST FORK BIG CREEK	0.040	1.303
MORMAN CREEK	0.048	1.396

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN OKLAHOMA

NAME - TENKILLER FERRY RES. (EUTROPHIC)
COUNTY - CHEROKEE, SEQUOYAH
STORET NO. - 4013 WORKING PAPER NO. 593, NTIS ACCESSION NO. PB-268 380/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	4169.90	51.19	15.5	41.170	240.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
75.	147.	1.6	0.039	0.016	0.550	0.900

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
6.6	5.2	(4/ 3/74) P	(6/14/74) P	(8/30/74) P	(10/21/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/ 3/74 GENERA	COUNT	6/14/74 GENERA	COUNT	8/30/74 GENERA	COUNT	10/21/74 GENERA	COUNT
STEPHANODISCUS	1685	CYCLOTELLA	369	ACHNANTHES	873	MELOSIRA	1707
MELOSIRA	481	MELOSIRA	276	RAPHIDIOPSIS	457	CYCLOTELLA	443
CHROOMONAS	289	CRYPTOMONAS	184	SYNEDRA	416	CHROOMONAS	316
CYCLOTELLA	96	CHLAMYDOMONAS	46	STEPHANODISCUS	374	ANKISTRODESMUS	253
CRYPTOMONAS	48			NITZSCHIA	333	TETRAEDRON	190
OTHER	145	OTHER	0	OTHER	666	OTHER	695
TOTAL	2744	TOTAL	875	TOTAL	3119	TOTAL	3604

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	14970.	**********	20.	92060.	109050.
NITROGEN	34410.	**********	705.	2561835.	2596950.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	59305.	46.	2.13
NITROGEN	2070280.	20.	50.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ILLINOIS RIVER	23.680	2483.6	0.092	2.230	28.	705.
BARREN FORK	8.450	795.1	0.036	1.627	11.	547.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
PINE BRANCH CREEK	0.048	1.127

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN OKLAHOMA

NAME - LAKE THUNDERBIRD (EUTROPHIC)
COUNTY - CLEVELAND
STORET NO. - 4014 WORKING PAPER NO. 594. NTIS ACCESSION NO. PB-268 355/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	662.30	24.56	6.0	1.840	14.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
180.	365.	0.9	0.027	0.009	0.150	0.675

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
8.4	0.1 - 0.2 (2)	(3/30/74) P	(6/11/74) P	(10/23/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/30/74 GENERA	COUNT	6/11/74 GENERA	COUNT	10/23/74 GENERA	COUNT
MELOSIRA	5775	CHROOMONAS	1366	MELOSIRA	738
ASTERIONELLA	344	CRYPTOMONAS	352	MERISMOPEDIA	221
CHROOMONAS	115	TRACHELOMONAS	132	CHROOMONAS	184
KIRCHNERIELLA	115	ANABAENA	44	CHLAMYDOMONAS	111
CRYPTOMONAS	76	CLOSTERIUM	44	ANACYSTIS(MICROCYSTIS)	111
OTHER	153	OTHER	0	OTHER	295
TOTAL	6578	TOTAL	1938	TOTAL	1660

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	5.	7875.	7880.
NITROGEN	**********	**********	265.	105475.	105740.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	440.	94.	0.32
NITROGEN	8235.	92.	4.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LITTLE RIVER	0.670	230.5	0.225	1.616	20.	167.
HOG CREEK	0.300	107.2	0.101	1.342	8.	98.
ROCK CREEK	0.070	29.8	0.114	1.430	7.	113.
DAVE BLUE CREEK	0.070	28.0	0.077	1.180	5.	88.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
PIG CREEK	0.091	0.939
UNNAMED STREAM F1	0.047	0.858

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN OKLAHOMA

NAME - WISTER RESERVOIR (EUTROPHIC)
COUNTY - LEFLORE
STORET NO. - 4015 WORKING PAPER NO. 595. NTIS ACCESSION NO. PB-268 294/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	2570.70	16.19	2.3	28.180	16.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
16.	47.	0.5	0.080	0.016	0.230	0.645

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
4.8	0.9 - 2.5 (2)	(3/28/74) N	(6/ 7/74) P	(8/26/74) N	(10/21/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/28/74 GENERA	COUNT	6/ 7/74 GENERA	COUNT	8/26/74 GENERA	COUNT	10/21/74 GENERA	COUNT
MELOSIRA	488	MELOSIRA	3422	MELOSIRA	344	MELOSIRA	2479
ANKISTRODESMUS	325	FLAGELLATES	254	ANABAENA	31	DACTYLOCOCCOPSIS	303
CHROOMONAS	293	NITZSCHIA	95	ANKISTRODESMUS	31	NITZSCHIA	220
CRYPTOMONAS	163	COELASTRUM	32	CLOSTERIUM	31	KIRCHNERIELLA	138
FLAGELLATES	65			CRYPTOMONAS	31	CRYPTOMONAS	83
OTHER	358	OTHER	0	OTHER	187	OTHER	494
TOTAL	1692	TOTAL	3803	TOTAL	655	TOTAL	3717

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2435.	**********	5.	43685.	46725.
NITROGEN	8500.	**********	140.	655650.	664290.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	58143.	LOSS	2.89
NITROGEN	791155.	LOSS	41.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
POTEAU RIVER	14.910	1320.9	0.047	0.728	16.	273.
OIL BRANCH	0.040	4.5	0.028	0.793	6.	181.
HOLSTON CREEK	1.520	149.7	0.025	0.453	7.	145.
FOURCHE MALINE CREEK	7.360	686.3	0.087	0.793	28.	278.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - LAKE ALBERT (EUTROPHIC)
COUNTY - KINGSBURY
STORET NO. - 4601 WORKING PAPER NO. 598. NTIS ACCESSION NO. PB-264 579/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	556.80	14.16	1.2	0.096	8.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
244.	1296.	0.3	0.321	0.019	0.170	4.420

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
106.3	11.3 - 13.1 (2)	(4/23/74) N	(7/12/74) N	(9/20/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/23/74 GENERA	COUNT	7/12/74 GENERA	COUNT	9/20/74 GENERA	COUNT
CYCLOTELLA	166067	APHANIZOMENON	16351	APHANIZOMENON	26711
DACTYLOCOCCOPSIS	7374	MELOSIRA	2633	MELOSIRA	12197
CHROOMONAS	2978	STEPHANODISCUS	1019	OOCYSTIS	1708
MELOSIRA	2269	OSCILLATORIA	1571	SCENEDESMUS	732
OSCILLATORIA	1702	OOCYSTIS	977	STEPHANODISCUS	610
OTHER	5106	OTHER	2549	OTHER	3901
TOTAL	185496	TOTAL	25100	TOTAL	45859

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED CREEK 81	0.747	4.872

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - LAKE ALVIN (EUTROPHIC)
COUNTY - LINCOLN
STORET NO. - 4602 WORKING PAPER NO. 599. NTIS ACCESSION NO. PB-265 567/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	114.00	0.44	3.7	0.058	325.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
152.	1169.	1.4	0.067	0.017	0.970	1.960

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
4.7	0.3 - 11.1 (2)	(4/23/74) P	(7/11/74) N	(9/20/74) P

SUMMARY OF PHYTOPLANKTON DATA

4/23/74 GENERA	COUNT	7/11/74 GENERA	COUNT	9/20/74 GENERA	COUNT
CHROOMONAS	182	CHROOMONAS	183	APHANIZOMENON	1108
		CENTRIC DIATOM	46	CHROOMONAS	623
		APHANIZOMENON	23	CRYPTOMONAS	173
		SYNEDRA	23	SCHROEDERIA	35
		SCHROEDERIA	23		
OTHER	0	OTHER	0	OTHER	0
TOTAL	182	TOTAL	298	TOTAL	1939

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	625.	625.
NITROGEN	**********	**********	**********	5480.	5480.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	295.	53.	1.42
NITROGEN	4190.	24.	12.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
NINEMILE CREEK	0.058	108.8	0.336	2.736	6.	46.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - ANGOSTURA RESERVOIR (MESOTROPHIC)
COUNTY - FALL RIVER
STORET NO. - 4603 WORKING PAPER NO. 600. NTIS ACCESSION NO. PB-265 574/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	23569.00	19.55	9.1	3.956	1.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
137.	1924.	1.9	0.019	0.005	0.160	0.470

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(4/24/74) P	(7/15/74) P	(9/11/74) P AND N
3.7	0.1			

SUMMARY OF PHYTOPLANKTON DATA

4/24/74 GENERA	COUNT	7/15/74 GENERA	COUNT	9/11/74 GENERA	COUNT
CHROOMONAS	1167	CHROOMONAS	493	CRYPTOMONAS	276
SYNEDRA	367	CARTERIA	308	CHROOMONAS	246
ANKISTRODESMUS	133	GYROSIGMA	92	DINOBRYON	61
ASTERIONELLA	67	NITZSCHIA	92	PHACUS	31
CRYPTOMONAS	66	MERISMOPEDIA	92	GLENODINIUM	31
OTHER	1	OTHER	156	OTHER	30
TOTAL	1801	TOTAL	1233	TOTAL	675

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1330.	**********	5.	8945.	10280.
NITROGEN	3995.	**********	235.	176090.	180320.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1100.	89.	0.53
NITROGEN	181245.	LOSS	9.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CHEYENNE RIVER	3.840	22558.9	0.080	1.278	0.4	7.
HORSEHEAD CREEK	0.095	611.2	0.067	1.152	0.3	6.

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - BRANT LAKE (EUTHOPHIC)
COUNTY - LAKE
STORET NO. - 4604 WORKING PAPER NO. 601. NTIS ACCESSION NO. PB-265 583/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	4.05	3.4	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
175.	1563.	1.7	0.194	0.113	0.130	2.020

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
34.2	4.0 - 12.7 (2)	(6/23/74) N	(7/12/74) N	(9/20/74) N

SUMMARY OF PHYTOPLANKTON DATA

6/23/74 GENERA	COUNT	7/12/74 GENERA	COUNT	9/20/74 GENERA	COUNT
CRYPTOMONAS	61	APHANIZOMENON	6848	APHANIZOMENON	1595
CHROOMONAS	30	CHROOMONAS	280	OSCILLATORIA	271
		STEPHANODISCUS	25	CHROOMONAS	271
		OSCILLATORIA	25		
		CRYPTOMONAS	25		
OTHER	0	OTHER	26	OTHER	0
TOTAL	91	TOTAL	7229	TOTAL	2137

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - LAKE BYRON (EUTROPHIC)
COUNTY - READLE
STORET NO. - 4605 WORKING PAPER NO. 602. NTIS ACCESSION NO. PB-265 604/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	5.86	2.4	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
300.	1942.	0.3	0.443	0.146	0.370	3.030

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
149.3	44.4	(4/24/74) N	(7/11/74) N	(9/18/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/24/74 GENERA	COUNT	7/11/74 GENERA	COUNT	9/18/74 GENERA	COUNT
PENNATE DIATOMS	337	APHANIZOMENON	8635	APHANIZOMENON	137293
DACTYLOCOCCOPSIS	289	MELOSIRA	2474	ANABAENA	563
SCHROEDERIA	144	OOCYSTIS	151		
CENTRIC DIATOM	96	CYCLOTELLA	101		
CRYPTOMONAS	48	ANABAENA	101		
OTHER	97	OTHER	607	OTHER	0
TOTAL	1011	TOTAL	12069	TOTAL	137856

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
FOSTER CREEK	0.243	2.332
UNNAMED CREEK C1	0.340	3.030

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - CLEAR LAKE (MESO-EUTROPHIC)
COUNTY - MARSHALL
STORET NO. - 4606 WORKING PAPER NO. 603. NTIS ACCESSION NO. PB-264 758/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	4.41	3.7	**********	*******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
229.	592.	1.8	0.027	0.009	0.075	1.365

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
12.0	**********	(4/29/74) N (7/18/74) NO DATA (9/18/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/29/74 GENERA	COUNT	7/18/74 GENERA	COUNT	9/18/74 GENERA	COUNT
CHROOMONAS	2775	MELOSIRA	1343	APHANIZOMENON	2668
FLAGELLATES	1057	FRAGILARIA	839	MELOSIRA	1723
ASTERIONELLA	330	CHROOMONAS	294	ANACYSTIS(MICHOCYSTIS)	778
MELOSIRA	264	OOCYSTIS	210	FRAGILARIA	445
FRAGILARIA	264	APHANIZOMENON	84	ASTERIONELLA	56
OTHER	134	OTHER	336	OTHER	110
TOTAL	4824	TOTAL	3106	TOTAL	5780

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - CLEAR LAKE (HYPEREUTROPHIC)
CUUNTY - MINNEHAHA
STONET NO. - 4607 WORKING PAPER NO. 604. NTIS ACCESSION NO. PB-265 575/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	1.91	1.1	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
270.	498.	0.1	1.400	0.468	0.270	8.800

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
691.0	49.2	(4/22/74) N	(7/12/74) N	(9/20/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/22/74 GENERA	COUNT	7/12/74 GENERA	COUNT	9/20/74 GENERA	COUNT
STEPHANODISCUS	3077	ANABAENA	27291	MERISMOPEDIA	52534
ANACYSTIS(MICROCYSTIS)	1581	MERISMOPEDIA	21390	OSCILLATORIA	34087
MERISMOPEDIA	1497	LYNGBYA	17510	ANACYSTIS(MICROCYSTIS)	10627
SURIRELLA	582	OSCILLATORIA	12900	LYNGBYA	6817
LYNGBYA	416	ANACYSTIS(MICROCYSTIS)	12355	KIRCHNERIELLA	3008
OTHER	2744	OTHER	10993	OTHER	10627
TOTAL	9897	TOTAL	110455	TOTAL	117700

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITHOGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHUSPHORUS	**********	*****	**********
NITHOGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - LAKE COCHRANE (EUTROPHIC)
COUNTY - DEUEL
STORET NO. - 4608

WORKING PAPER NO. 695. NTIS ACCESSION NO. PB- /AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	1.48	3.4	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
286.	2571.	1.4	0.037	0.008	0.150	1.528

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
15.7	0.1	(6/24/74) P	(7/12/74) N	(9/19/74) N

SUMMARY OF PHYTOPLANKTON DATA

6/24/74 GENERA	COUNT	7/12/74 GENERA	COUNT	9/19/74 GENERA	COUNT
OSCILLATORIA	660	APHANOTHECE	8734	ANACYSTIS(MICROCYSTIS)	1789
CENTRIC DIATOM	342	COELOSPHAERIUM	485	APHANOTHECE	617
SYNEDRA	213	PERIDINIUM	485	PERIDINIUM	494
COELOSPHAERIUM	43	LYNGBYA	323	CHROOCOCCUS	247
CRYPTOMONAS	43	ROTHYOCOCCUS	81	COELOSPHAERIUM	123
OTHER	384	OTHER	325	OTHER	308
TOTAL	1665	TOTAL	10433	TOTAL	3578

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - COTTONWOOD LAKE (EUTROPHIC)
COUNTY - SPINK
STORET NO. - 4609 WORKING PAPER NO. 606. NTIS ACCESSION NO. PB-265 573/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	6.68	2.0	••••••••••	•••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
520.	1754.	0.3	0.685	0.417	0.265	2.820

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(4/24/74) N	(7/11/74) N	(9/18/74) N
112.0	8.4			

SUMMARY OF PHYTOPLANKTON DATA

4/24/74 GENERA	COUNT	7/11/74 GENERA	COUNT	9/18/74 GENERA	COUNT
STEPHANODISCUS	721	APHANIZOMENON	2574	APHANIZOMENON	13002
DACTYLOCOCCOPSIS	721	CHROOCOCCUS	814	ANABAENA	875
NITZSCHIA	320	ANABAENA	263	CHROOCOCCUS	318
SYNEDRA	120	OOCYSTIS	79	CHROOMONAS	159
CRYPTOMONAS	120	SCHROEDERIA	79	OOCYSTIS	80
OTHER	321	OTHER	78	OTHER	39
TOTAL	2323	TOTAL	3887	TOTAL	14473

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
MEDICINE CREEK	0.391	2.308

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - DEERFIELD LAKE (MESOTROPHIC)
COUNTY - PENNINGTON
STORET NO. - 4610 WORKING PAPER NO. 607. NTIS ACCESSION NO. PB-264 512/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	248.60	1.68	10.5	0.227	2.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
218.	285.	5.0	0.033	0.022	0.080	0.260

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
3.6	••••••••••	(4/25/74) P	(7/15/74) N	(9/11/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/25/74 GENERA	COUNT	7/15/74 GENERA	COUNT	9/11/74 GENERA	COUNT
CHROOMONAS	2142	CHROOMONAS	521	CHROOMONAS	265
SYNEDRA	863	FRAGILARIA	290	ASTERIONELLA	151
CRYPTOMONAS	480	CRYPTOMONAS	203	FRAGILARIA	114
ASTERIONELLA	288	FLAGELLATES	87	ANABAENA	38
TABELLARIA	64	CENTRIC DIATOM	116	CRYPTOMONAS	38
OTHER	0	OTHER	115	OTHER	113
TOTAL	3837	TOTAL	1332	TOTAL	719

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	320.	320.
NITROGEN	••••••••••	••••••••••	••••••••••	7755.	7755.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	275.	14.	0.19
NITROGEN	5500.	29.	4.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CASTLE CREEK	0.270	215.0	0.030	0.615	1.	24.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
GOLD RUN	0.064	0.903

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - ENEMY SWIM LAKE (EUTROPHIC)
COUNTY - DAY
STORET NO. - 4611 WORKING PAPER NO. 608. NTIS ACCESSION NO. PB-265 584/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	8.68	3.0	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
259.	373.	1.5	0.037	0.013	0.085	1.005

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
14.2	**********	(4/25/74) N	(7/11/74) N	(9/19/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/25/74 GENERA	COUNT	7/11/74 GENERA	COUNT	9/19/74 GENERA	COUNT
CHROOMONAS	3573	APHANOTHECE	1576	FRAGILARIA	1863
ASTERIONELLA	2349	CHROOMONAS	649	COELOSPHAERIUM	1139
FLAGELLATES	1026	OOCYSTIS	417	APHANOTHECE	362
FRAGILARIA	992	MELOSIRA	278	OOCYSTIS	311
DINOBRYON	529	FLAGELLATES	232	APHANIZOMENON	207
OTHER	596	OTHER	371	OTHER	569
TOTAL	9065	TOTAL	3523	TOTAL	4451

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - LAKE HERMAN (EUTHOPHIC)
COUNTY - LAKE
STORET NO. - 4612 WORKING PAPER NO. 609. NTIS ACCESSION NO. PB-265 580/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	5.46	1.7	••••••••••	3.3

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
189.	983.	0.4	0.340	0.174	0.155	2.445

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
58.7	11.2	(4/23/74) N	(7/12/74) N	(9/20/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/23/74 GENERA	COUNT	7/12/74 GENERA	COUNT	9/20/74 GENERA	COUNT
CENTRIC DIATOM	4011	APHANIZOMENON	14869	DACTYLOCOCCOPSIS	2974
DACTYLOCOCCOPSIS	3735	CHROOMONAS	471	MERISMOPEDIA	2811
CHROOMONAS	2185	SCHROEDERIA	135	STEPHANODISCUS	1100
MELOSIRA	498	ANACYSTIS(MICROCYSTIS)	67	ANACYSTIS(MICROCYSTIS)	733
SYNEDRA	138	APHANOCAPSA	67	CHROOMONAS	530
OTHER	748	OTHER	101	OTHER	2199
TOTAL	11315	TOTAL	15710	TOTAL	10347

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED CREEK A1	0.520	5.460
UNNAMED CREEK C1	0.367	2.942

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - LAKE ST. JOHN (EUTROPHIC)
COUNTY - HAMLIN
STORET NO. - 4613 WORKING PAPER NO. 610. NTIS ACCESSION NO. PB-264 770/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	450.70	4.86	1.2	0.066	2.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
185.	1290.	0.3	0.348	0.025	0.080	3.390

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
120.9	4.0 - 15.2 (2)	(4/23/74) N (7/12/74) N (9/20/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/23/74 GENERA	COUNT	7/12/74 GENERA	COUNT	9/20/74 GENERA	COUNT
NITZSCHIA	58421	MELOSIRA	2147	OSCILLATORIA	44767
FLAGELLATES	20082	OOCYSTIS	1975	BINUCLEARIA	4277
MELOSIRA	10155	STEPHANODISCUS	1632	CLOSTERIUM	3422
ANKISTRODESMUS	6276	SCENEDESMUS	1374	COELOSPHAERIUM	3279
STEPHANODISCUS	5135	ANACYSTIS(MICROCYSTIS)	1288	MELOSIRA	2709
OTHER	5590	OTHER	8585	OTHER	15541
TOTAL	105659	TOTAL	17001	TOTAL	73995

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - LAKE KAMPESKA (EUTROPHIC)
COUNTY - CODINGTON
STORET NO. - 4614 WORKING PAPER NO. 611. NTIS ACCESSION NO. PB-265 568/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	19.43	3.4	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
224.	419.	0.8	0.220	0.128	0.105	1.105

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
20.6	7.7 - 11.4 (2)	(4/25/74) N	(7/12/74) N	(9/19/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/25/74 GENERA	COUNT	7/12/74 GENERA	COUNT	9/19/74 GENERA	COUNT
CYCLOTELLA	531	APHANIZOMENON	2436	APHANIZOMENON	6830
DINOBRYON	163	ANACYSTIS(MICROCYSTIS)	635	CHROOMONAS	187
FRAGILARIA	163	SCHROEDERIA	477	SCHROEDERIA	149
CHROOMONAS	163	CHROOMONAS	424	ANACYSTIS(MICROCYSTIS)	37
SYNEDRA	123	PHORMIDIUM	212		
OTHER	83	OTHER	741	OTHER	0
TOTAL	1226	TOTAL	4925	TOTAL	7203

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
INNAMED STREAM A1	0.138	1.952
UNNAMED STREAM B1	3.000	8.035

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - LAKE MADISON (EUTROPHIC)
COUNTY - LAKE
STORET NO. - 4615 WORKING PAPER NO. 612. NTIS ACCESSION NO. PB- /AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	310.80	11.33	3.0	0.099	10.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
164.	1461.	1.4	0.250	0.107	0.090	2.520

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
22.6	1.7 - 4.7 (2)	(4/23/74) N	(7/12/74) N	(9/20/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/23/74 GENERA	COUNT	7/12/74 GENERA	COUNT	9/20/74 GENERA	COUNT
FLAGELLATES	58722	APHANIZOMENON	720	APHANIZOMENON	10641
CHROOMONAS	2812	SCHROEDERIA	48	PHORMIDIUM	1205
ANKISTRODESMUS	1930			ACTINASTRUM	683
OSCILLATORIA	827			CYCLOTELLA	642
KIRCHNERIELLA	607			OSCILLATORIA	522
OTHER	2150	OTHER	0	OTHER	2931
TOTAL	67048	TOTAL	768	TOTAL	16624

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	4245.	**********	95.	3930.	8270.
NITROGEN	10395.	**********	3560.	25590.	39545.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	0.73
NITROGEN	**********	*****	3.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
PARK CREEK AT RT	0.090	235.7	4.635	13.709	16.	56.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - LAKE MITCHELL (EUTROPHIC)
COUNTY - DAVISON
STORET NO. - 4616 WORKING PAPER NO. 613. NTIS ACCESSION NO. PB-264 514/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	**********	2.71	3.7	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
187.	1017.	0.9	0.099	0.015	0.085	1.040

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
14.9	1.1	(6/23/74) N	(7/11/74) N	(9/18/74) N

SUMMARY OF PHYTOPLANKTON DATA

6/23/74 GENERA	COUNT	7/11/74 GENERA	COUNT	9/18/74 GENERA	COUNT
DACTYLOCOCCOPSIS	5184	OSCILLATORIA	627	PHORMIDIUM	2254
CRUCIGENIA	2641	CARTERIA	502	DACTYLOCOCCOPSIS	2158
NITZSCHIA	1907	DACTYLOCOCCOPSIS	502	MERISMOPEDIA	2014
SCENEDESMUS	294	CRUCIGENIA	314	CHROOMONAS	1678
ANACYSTIS(MICROCYSTIS)	49	EUGLENA	314	SCENEDESMUS	1582
OTHER	244	OTHER	815	OTHER	10119
TOTAL	10319	TOTAL	3074	TOTAL	19805

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
FIRESTEEL CREEK	0.097	1.578

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - LAKE NORDEN (EUTROPHIC)
COUNTY - HAMLIN
STORET NO. - 4617 WORKING PAPER NO. 614. NTIS ACCESSION NO. PB-265 609/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	3.02	2.1	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
215.	1469.	0.3	0.256	0.050	0.165	2.110

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
46.8	4.7	(4/23/74) N	(7/12/74) N	(9/19/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/23/74 GENERA	COUNT	7/12/74 GENERA	COUNT	9/19/74 GENERA	COUNT
CHROOMONAS	30800	CRUCIGENIA	10706	MELOSIRA	7307
SYNEDRA	9774	APHANIZOMENON	1798	APHANIZOMENON	2036
ANKISTRODESMUS	1524	OOCYSTIS	1389	CHLOROPHYTAN FILAMENTS	1437
CRYPTOMONAS	1255	CHROOMONAS	1144	SYNEDRA	898
MELOSIRA	1210	CYMBELLA	1062	STEPHANODISCUS	659
OTHER	2243	OTHER	3229	OTHER	4074
TOTAL	46806	TOTAL	19328	TOTAL	16411

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - EAST OAKWOOD LAKE (EUTROPHIC)
COUNTY - BROOKINGS
STUDY NO. - 4618 WORKING PAPER NO. 615. NTIS ACCESSION NO. PB-265 623/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	4.05	1.5	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
159.	1015.	0.3	0.146	0.009	0.175	4.420

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
113.6	6.1	(4/23/74) P	(7/12/74) N	(9/20/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/23/74 GENERA	COUNT	7/12/74 GENERA	COUNT	9/20/74 GENERA	COUNT
FRAGILARIA	8323	APHANOCAPSA	8821	ANABAENOPSIS	77640
FLAGELLATES	6087	MERISMOPEDIA	6829	LYNGBYA	10881
MERISMOPEDIA	4596	LYNGBYA	6046	OSCILLATORIA	7352
ANKISTRODESMUS	2485	FRAGILARIA	4268	APHANOTHECE	2353
LYNGBYA	2236	PHORMIDIUM	3486	NITZSCHIA	2059
OTHER	9690	OTHER	12235	OTHER	3235
TOTAL	33417	TOTAL	41685	TOTAL	103520

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - WEST OAKWOOD LAKE (EUTROPHIC)
COUNTY - BROOKINGS
STORET NO. - 4619 WORKING PAPER NO. 616. NTIS ACCESSION NO. PB-265 624/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	1.21	1.8	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
153.	870.	0.4	0.181	0.021	0.135	5.165

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
159.7	**********	(4/23/74) P	(7/12/74) N	(9/20/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/23/74 GENERA	COUNT	7/12/74 GENERA	COUNT	9/20/74 GENERA	COUNT
OSCILLATORIA	131350	APHANIZOMENON	131301	APHANIZOMENON	134077
CENTRIC DIATOM	2504	OSCILLATORIA	22757	OSCILLATORIA	19459
CHLOROPHYTAN CELLS	2504	MELOSIRA	14948	MERISMOPEDIA	2137
PENNATE DIATOMS	1926	LYNGBYA	10375	MELOSIRA	1462
CHROOMONAS	1733	ANACYSTIS(MICROCYSTIS)	1785	COELOSPHAERIUM	112
OTHER	3081	OTHER	3012	OTHER	114
TOTAL	143098	TOTAL	184178	TOTAL	157361

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - PACTOLA RESERVOIR (OLIGOTROPHIC)
COUNTY - PENNINGTON
STORET NO. - 4620 WORKING PAPER NO. 617. NTIS ACCESSION NO. PB-265 582/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	828.88	3.48	16.4	1.142	1.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
199.	270.	5.4	0.011	0.006	0.070	0.245

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
1.5	**********	(6/25/74) P (7/15/74) N (9/12/74) N

SUMMARY OF PHYTOPLANKTON DATA

6/25/74 GENERA	COUNT	7/15/74 GENERA	COUNT	9/12/74 GENERA	COUNT
CHROOMONAS	291	CHROOMONAS	262	CHROOMONAS	547
FRAGILARIA	196	ASTERIONELLA	81	ANACYSTIS(MICROCYSTIS)	96
ANKISTRODESMUS	97	CRYPTOMONAS	48	CRYPTOMONAS	49
GYMNODINIUM	48	STEPHANODISCUS	48	EUGLENA	24
				ASTERIONELLA	24
OTHER	0	OTHER	0	OTHER	21
TOTAL	631	TOTAL	493	TOTAL	761

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	25.	4060.	4085.
NITROGEN	**********	**********	870.	38675.	39545.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	455.	89.	1.17
NITROGEN	22365.	43.	11.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
RAPID CREEK	1.130	756.3	0.064	0.734	5.	42.

VI. MEAN NUTRIENT CONCENTRATIONS IN GAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
N. FORK CASTLE CREEK	0.031	0.816
SILVER CREEK	0.012	0.452
GILLET CREEK	0.022	0.518
SLATE CREEK	0.032	0.490

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - PICKEREL LAKE (EUTROPHIC)
COUNTY - DAY
STORET NO. - 4621 WORKING PAPER NO. 618. NTIS ACCESSION NO. PB- /AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	3.86	0.1	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
242.	390.	1.5	0.049	0.009	0.095	••••••

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
15.8	••••••••••	(6/25/74) N (7/11/74) N (9/19/74) N

SUMMARY OF PHYTOPLANKTON DATA

6/25/74 GENERA	COUNT	7/11/74 GENERA	COUNT	9/19/74 GENERA	COUNT
ASTERIONELLA	15930	CHROOMONAS	600	ANABAENA	3160
CHROOMONAS	3037	MELOSIRA	363	FRAGILARIA	1123
FRAGILARIA	898	ANACYSTIS(MICROCYSTIS)	141	FLAGELLATES	998
ANACYSTIS(MICROCYSTIS)	359	OSCILLATORIA	81	ANACYSTIS(MICROCYSTIS)	375
CRUCIGENIA	180	SCHROEDERIA	81	PHORMIDIUM	335
OTHER	628	OTHER	160	OTHER	621
TOTAL	21640	TOTAL	1290	TOTAL	6612

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - LAKE PUINSETT (EUTROPHIC)
COUNTY - BROOKINGS,HAMLIN
STORET NO. - 4622 WORKING PAPER NO. 619. NTIS ACCESSION NO. PB-264 762/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	731.00	29.26	2.9	0.073	35.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
267.	1036.	0.9	0.115	0.023	0.315	2.765

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
48.2	0.8	(6/25/74) P	(7/12/74) N	(9/19/74) N

SUMMARY OF PHYTOPLANKTON DATA

6/25/74 GENERA	COUNT	7/12/74 GENERA	COUNT	9/19/74 GENERA	COUNT
CHROOMONAS	3804	OOCYSTIS	1380	APHANIZOMENON	2380
CRYPTOMONAS	1986	PHORMIDIUM	1269	CYANOPHYTON FILAMENTS	641
FLAGELLATES	1214	ANACYSTIS(MICROCYSTIS)	991	OOCYSTIS	305
ANACYSTIS(MICROCYSTIS)	282	CRYPTOMONAS	595	STIPITOCOCCUS	244
STEPHANODISCUS	162	CHROOMONAS	397	STEPHANODISCUS	153
OTHER	284	OTHER	644	OTHER	945
TOTAL	7370	TOTAL	5304	TOTAL	4668

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED STREAM #1	0.955	10.925

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - SOUTH RED IRON LAKE (MESO-EUTROPHIC)
COUNTY - MARSHALL
STORET NO. - 4623 WORKING PAPER NO. 620, NTIS ACCESSION NO. PB-264 755/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	2.51	2.1	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
216.	515.	1.8	0.042	0.010	0.110	1.520

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
6.9	••••••••••	(4/29/74) P (7/10/74) NO DATA (9/18/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/29/74 GENERA	COUNT	7/10/74 GENERA	COUNT	9/18/74 GENERA	COUNT
MELOSIRA	1531	MELOSIRA	661	MELOSIRA	506
CHROOMONAS	557	CHROOMONAS	441	ANABAENA	119
CRYPTOMONAS	371	ANABAENA	397	OOCYSTIS	60
FRAGILARIA	278	STEPHANODISCUS	44	APHANIZOMENON	30
SYNEDRA	186	SYNEDRA	44	LYNGBYA	30
OTHER	509	OTHER	87	OTHER	29
TOTAL	3432	TOTAL	1674	TOTAL	774

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - RICHMOND LAKE (EUTROPHIC)
COUNTY - BROWN
STORET NO. - 4624 WORKING PAPER NO. 621. NTIS ACCESSION NO. PB-265 566/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	450.70	3.35	4.6	0.016	54.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
265.	905.	2.3	0.187	0.144	0.150	1.570

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
18.5	8.6	(4/26/74) N	(7/10/74) N	(9/18/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/26/74 GENERA	COUNT	7/10/74 GENERA	COUNT	9/18/74 GENERA	COUNT
CHROOMONAS	907	APHANIZOMENON	1618	APHANIZOMENON	7579
STEPHANODISCUS	272	CHROOMONAS	350	CHROOMONAS	234
CRYPTOMONAS	45	SCHROEDERIA	175	OSCILLATORIA	94
SCHROEDERIA	45	ANABAENA	44		
OTHER	0	OTHER	0	OTHER	0
TOTAL	1269	TOTAL	2187	TOTAL	7907

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	30.	345.	375.
NITROGEN	**********	**********	1145.	4930.	6075.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	30.	92.	0.11
NITROGEN	410.	93.	1.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
FOOT CREEK	0.010	373.0	0.572	2.611	0.4	2.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
UNNAMED CREEK #1	1.070	2.760

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - ROY LAKE (EUTROPHIC)
COUNTY - MARSHALL
STORET NO. - 4625 WORKING PAPER NO. 622. NTIS ACCESSION NO. PB-265 599/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	6.85	3.3	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
262.	1152.	1.8	0.034	0.010	0.070	1.970

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
13.3	**********	(4/29/74) P AND N (7/10/74) NO DATA (9/18/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/29/74 GENERA	COUNT	7/10/74 GENERA	COUNT	9/18/74 GENERA	COUNT
CHROOMONAS	1633	APHANOTHECE	1837	FRAGILARIA	5635
SYNEDRA	907	FRAGILARIA	1225	ANACYSTIS(MICRUCYSTIS)	1120
CENTRIC DIATOM	272	OOCYSTIS	700	CHROOMONAS	700
CRYPTOMONAS	272	ANABAENA	262	APHANIZOMENON	630
FRAGILARIA	181	CHROOMONAS	262	MELOSIRA	455
OTHER	182	OTHER	351	OTHER	1226
TOTAL	3447	TOTAL	4637	TOTAL	9766

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - SAND LAKE (EUTROPHIC)
COUNTY - BROWN
STORET NO. - 4676 WORKING PAPER NO. 623. NTIS ACCESSION NO. PB-265 608/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	10308.20	3.10	0.8	2.364	12.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
314.	849.	0.7	0.489	0.288	0.110	2.290

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
65.8	12.2	(4/26/74) N	(7/10/74) N	(9/18/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/26/74 GENERA	COUNT	7/10/74 GENERA	COUNT	9/18/74 GENERA	COUNT
STEPHANODISCUS	13131	APHANIZOMENON	17930	OSCILLATORIA	9303
DACTYLOCOCCOPSIS	6194	ANACYSTIS(MICROCYSTIS)	448	APHANIZOMENON	7612
CHROOMONAS	3592	CRYPTOMONAS	299	STEPHANODISCUS	4229
ANKISTRODESMUS	1982	CRUCIGENIA	299	CHROOMONAS	3637
SYNEDRA	1734	MELOSIRA	150	DACTYLOCOCCOPSIS	2876
OTHER	4460	OTHER	223	OTHER	12432
TOTAL	31093	TOTAL	19349	TOTAL	40089

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3060.	**********	**********	18855.	21915.
NITROGEN	9180.	**********	**********	171950.	181130.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	17010.	22.	7.07
NITROGEN	142740.	21.	58.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
JAMES RIVER	2.350	9842.0	0.247	2.117	2.	16.
DRY RUN	0.007	129.5	1.342	4.547	2.*	16.*

* ESTIMATED

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - SHERIDAN LAKE (EUTROPHIC)
COUNTY - PENNINGTON
STORET NO. - 4627 WORKING PAPER NO. 624. NTIS ACCESSION NO. PB-265 585/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	230.50	1.56	10.2	0.140	3.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
104.	177.	2.7	0.053	0.016	0.105	0.545

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(4/25/74) N	(7/15/74) N	(9/12/74) N
15.4	••••••••••			

SUMMARY OF PHYTOPLANKTON DATA

4/25/74 GENERA	COUNT	7/15/74 GENERA	COUNT	9/12/74 GENERA	COUNT
FRAGILARIA	1409	FRAGILARIA	2250	APHANIZOMENON	632
CHYPTOMONAS	1118	CRYPTOMONAS	310	APHANOCAPSA	446
MESOSTIGMA	895	ANACYSTIS(MICROCYSTIS)	310	ANABAENA	149
CHROOMONAS	626	ANABAENA	116	CYANOPHYTON FILAMENTS	149
FLAGELLATES	447	ANKISTRODESMUS	78	FRAGILARIA	112
OTHER	1298	OTHER	118	OTHER	297
TOTAL	5793	TOTAL	3182	TOTAL	1785

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	5.	290.	295.
NITROGEN	••••••••••	••••••••••	245.	5075.	5320.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	170.	42.	0.19
NITROGEN	3060.	42.	3.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SPRING CREEK	0.128	183.9	0.041	0.674	1.	15.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
HORSE CREEK	0.023	0.802

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - STOCKADE LAKE (EUTROPHIC)
COUNTY - CUSTER
STORET NO. - 4628 WORKING PAPER NO. 625. NTIS ACCESSION NO. PB-265 586/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	202.00	0.53	5.8	0.135	274.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
118.	227.	1.7	0.233	0.109	0.150	1.270

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
25.4	6.7 - 27.5 (2)	(4/24/74) N	(7/15/74) N	(9/11/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/24/74 GENERA	COUNT	7/15/74 GENERA	COUNT	9/11/74 GENERA	COUNT
CENTRIC DIATOM	16809	APHANIZOMENON	3098	APHANIZOMENON	14916
CRYPTOMONAS	2873	PHORMIDIUM	2278	CHROOMONAS	437
FLAGELLATES	2135	ANACYSTIS(MICROCYSTIS)	516	SCENEDESMUS	131
UNKNOWN CELLS	349	FRAGILARIA	395	OOCYSTIS	131
ASTERIONELLA	194	STAURASTRUM	152	MELOSIRA	87
OTHER	117	OTHER	273	OTHER	351
TOTAL	22477	TOTAL	6712	TOTAL	16053

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	235.	**********	**********	425.	660.
NITROGEN	540.	**********	**********	5050.	5590.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1075.	LOSS	1.25
NITROGEN	14780.	LOSS	10.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
FRENCH CHEEK A2	0.123	173.5	0.175	0.958	2.	22.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
FRENCH CHEEK A3	0.065	1.931
BISMARCK LAKE OUTLET	0.070	1.183
RUBY CREEK	0.053	1.659

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - EAST VERMILLION LAKE (EUTHOPHIC)
COUNTY - MCCOOK
STORET NO. - 4629 WORKING PAPER NO. 626. NTIS ACCESSION NO. PB-265 565/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	1036.00	2.23	3.7	0.095	2.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
149.	695.	0.7	0.211	0.092	0.100	1.840

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
100.8	4.5 - 27.9 (2)	(4/22/74) N (7/11/74) N (9/20/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/22/74 GENERA	COUNT	7/11/74 GENERA	COUNT	9/20/74 GENERA	COUNT
CHRYSOPHYTAN CELLS	3134	APHANIZOMENON	14059	APHANIZOMENON	45153
STEPHANODISCUS	1458	OSCILLATORIA	378	OSCILLATORIA	485
CHROOMONAS	310			NITZSCHIA	242
DACTYLOCOCCOPSIS	310				
OSCILLATORIA	248				
OTHER	156	OTHER	0	OTHER	0
TOTAL	5616	TOTAL	14437	TOTAL	45880

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	5.	655.	660.
NITROGEN	**********	**********	90.	8440.	8530.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	120.	82.	0.30
NITROGEN	3655.	57.	3.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
VERMILLION RIVER	0.081	932.4	0.205	2.013	0.6	6.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - WALL LAKE (EUTROPHIC)
COUNTY - MINNEHAHA
STORET NO. - 4630 WORKING PAPER NO. 627. NTIS ACCESSION NO. PB-265 600/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	0.90	2.6	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
173.	1083.	1.5	0.194	0.076	0.160	2.250

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
55.3	2.5 - 22.1 (2)	(4/22/74) N (7/11/74) N (9/20/74) N

SUMMARY OF PHYTOPLANKTON DATA

4/22/74 GENERA	COUNT	7/11/74 GENERA	COUNT	9/20/74 GENERA	COUNT
CENTRIC DIATOM	951	APHANIZOMENON	3724	APHANIZOMENON	5614
FLAGELLATES	565	OSCILLATORIA	624	OSCILLATORIA	1191
FRAGILARIA	119				
CHROOMONAS	89				
ANKISTRODESMUS	30				
OTHER	29	OTHER	0	OTHER	0
TOTAL	1783	TOTAL	4348	TOTAL	6805

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN SOUTH DAKOTA

NAME - NORTH WAUBAY LAKE (EUTROPHIC)
COUNTY - DAY
STORET NO. - 4631 WORKING PAPER NO. 628. NTIS ACCESSION NO. PB- /AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	14.16	2.7	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
418.	4301.	0.8	0.098	0.023	0.145	3.620

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(4/25/74) N	(7/11/74) N	(9/19/74) N
127.0	**********			

SUMMARY OF PHYTOPLANKTON DATA

4/25/74 GENERA	COUNT	7/11/74 GENERA	COUNT	9/19/74 GENERA	COUNT
SURIHELLA	291	APHANIZOMENON	11360	GLOEOCYSTIS	4061
CYCLOTELLA	166	PHORMIDIUM	3877	APHANIZOMENON	1684
CHROOMONAS	125	CHAETOCEROS	2288	NODULARIA	74
ANACYSTIS(MICROCYSTIS)	83	CHROOCOCCUS	1435	CHAETOCEROS	50
AMPHIPRORA	83	CHROOMONAS	194	NITZSCHIA	25
OTHER	416	OTHER	736	OTHER	99
TOTAL	1164	TOTAL	19890	TOTAL	5993

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN TEXAS

NAME - AMISTAD RESERVOIR (MESOTROPHIC)
COUNTY - VAL VERDE
STORET NO. - 4801 WORKING PAPER NO. 631. NTIS ACCESSION NO. PH-268 312/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	319828.90	262.40	16.5	58.506	3.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
139.	823.	3.3	0.013	0.009	0.500	0.720

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
2.0	0.1 - 0.3 (2)	(3/ 5/74) P	(5/14/74) P	(8/ 6/74) NO DATA	(10/29/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/ 5/74 GENERA	COUNT	5/15/74 GENERA	COUNT	8/ 7/74 GENERA	COUNT	10/29/74 GENERA	COUNT
CYSTS	262	COELASTRUM	161	NAVICULA	739	COELASTRUM	30
CHROOMONAS	174	CRYPTOMONAS	107	CHROOMONAS	370	CHROOMONAS	20
COELASTRUM	87	CHROOMONAS	40	OSCILLATORIA	269	CRYPTOMONAS	20
CRYPTOMONAS	87	DINOBRYON	40	PERIDINIUM	168	MELOSIRA	20
CYCLOTELLA	87	FRAGILARIA	40	CENTRIC DIATOM	101	SCENEDESMUS	10
OTHER	44	OTHER	68	OTHER	268	OTHER	21
TOTAL	741	TOTAL	456	TOTAL	1915	TOTAL	121

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	257295.	257295.
NITROGEN	••••••••••	••••••••••	••••••••••	4244880.	4244880.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	14320.	94.	0.98
NITROGEN	1193650.	72.	16.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
RIO GRANDE RIVER	38.820	209271.9	0.273	1.727	1.	10.
EVANS CREEK	0.020	114.5	••••••••••	••••••••••	1.*	49.*
DEVIL'S RIVER	10.900	10259.0	0.011	2.649	0.4	91.
PECOS RIVER	7.410	91116.1	0.014	2.642	•••••••••• **	6.

* ESTIMATED

** LESS THAN 0.1

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE BASTROP (MESO-EUTROPHIC)
COUNTY - BASTROP
STORET NO. - 4802 WORKING PAPER NO. 632. NTIS ACCESSION NO. PB- /AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	24.60	3.67	5.6	0.238	5.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
137.	841.	2.0	0.022	0.007	0.090	0.525

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
12.4	••••••••••	(3/14/74) N (5/22/74) P (8/16/74) NO DATA (11/ 4/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/14/74 GENERA	COUNT	5/22/74 GENERA	COUNT	11/ 4/74 GENERA	COUNT
PEDIASTRUM	834	PENNATE DIATOMS	827	CHROOMONAS	690
OOCYSTIS	371	OSCILLATORIA	674	CRYPTOMONAS	235
CHROOMONAS	278	MERISMOPEDIA	643	PEDIASTRUM	63
CRYPTOMONAS	232	PEDIASTRUM	337	TETRAEDRON	47
SCENEDESMUS	185	CHROOMONAS	214	NITZSCHIA	31
OTHER	394	OTHER	552	OTHER	16
TOTAL	2294	TOTAL	3247	TOTAL	1082

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	985.	985.
NITROGEN	••••••••••	••••••••••	••••••••••	12100.	12100.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	105.	89.	0.27
NITROGEN	2795.	77.	3.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SPICER CREEK	0.007	2.3	0.022	0.629	2.	61.
COLORADO RIVER DIVERSION	0.186	••••••••••	0.565	1.735	••••••••••	••••••••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - NELTON RESERVOIR (MESO-EUTROPHIC)
COUNTY - HELL, CONTELL
STORET NO. - 4901 WORKING PAPER NO. 633. NTIS ACCESSION NO. PB-268 281/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	9230.80	50.27	10.8	18.320	1.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
142.	388.	3.1	0.016	0.007	0.185	0.520

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
4.0	0.1 - 0.3 (2)	(3/13/74) P (5/20/74) P (8/14/74) NO DATA (11/ 1/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/13/74 GENERA	COUNT	5/20/74 GENERA	COUNT	8/14/74 GENERA	COUNT	11/ 1/74 GENERA	COUNT
CHROOMONAS	539	OOCYSTIS	2057	RAPHIDIOPSIS	885	CHROOMONAS	499
CRYPTOMONAS	135	ANACYSTIS(MICROCYSTIS)	853	ANABAENOPSIS	442	MERISMOPEDIA	461
SCENEDESMUS	67	COELASTRUM	556	OSCILLATORIA	221	ANABAENOPSIS	384
PENNATE DIATOMS	34	DINOBRYON	452	CANTENIA	184	DACTYLOCOCCOPSIS	269
SPHAEROCYSTIS	34	CHROOMONAS	401	PENNATE DIATOMS	148	RAPHIDIOPSIS	192
OTHER	0	OTHER	953	OTHER	553	OTHER	577
TOTAL	809	TOTAL	5260	TOTAL	2433	TOTAL	2382

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	24210.	**********	50.	174400.	198660.
NITROGEN	57570.	**********	1965.	894340.	953855.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	17855.	91.	3.95
NITROGEN	480930.	50.	19.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LEON RIVER	10.110	6728.8	0.120	1.524	5.	70.
COMANCHE CREEK	5.610	1815.6	0.760	1.378	71.	129.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
OWL CREEK	0.013	0.991

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - BRAUNIG LAKE (EUTROPHIC)
COUNTY - BEXAR
STORET NO. - 4804 WORKING PAPER NO. 634. NTIS ACCESSION NO. PB-269 234/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	24.30	5.46	6.0	0.280	3.7

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
168.	1250.	1.0	0.134	0.062	0.150	1.060

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
22.8	4.3 - 7.6 (2)	(3/12/74) N (5/21/74) N (8/14/74) NO DATA (11/ 5/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/12/74 GENERA	COUNT	5/21/74 GENERA	COUNT	8/14/74 GENERA	COUNT	11/ 5/74 GENERA	COUNT
CENTRIC DIATOM	7060	NITZSCHIA	654	CENTRIC DIATOM	3480	OSCILLATORIA	4143
NITZSCHIA	5756	COCCOID CHLOROPHYTA CELL	551	SCENEDESMUS	1723	DACTYLOCOCCOPSIS	989
MERISMOPEDIA	2673	TETRAEDRON	482	CHLOROCOCCALAN CELL	1505	SCENEDESMUS	775
DACTYLOCOCCOPSIS	2193	MESOSTIGMA	413	MERISMOPEDIA	627	COCCOID CHLOROPHYTA CELL	642
TETRAEDRON	1980	OSCILLATORIA	275	OSCILLATORIA	564	LYNGBYA	581
OTHER	1851	OTHER	1342	OTHER	2980	OTHER	2353
TOTAL	21523	TOTAL	3717	TOTAL	10879	TOTAL	9283

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE BROWNWOOD (EUTHOPHIC)
COUNTY - BROWN
STORET NO. - 4805 WORKING PAPER NO. 635. NTIS ACCESSION NO. PB-268 284/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	1975.60	29.54	6.0	4.893	1.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
120.	540.	0.9	0.027	0.007	0.100	0.485

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
		(3/ 7/74)	(5/16/74)	(8/ 6/74)	(10/29/74)
4.9	0.1	P	P	N	N

SUMMARY OF PHYTOPLANKTON DATA

3/ 7/74 GENERA	COUNT	5/16/74 GENERA	COUNT	8/ 6/74 GENERA	COUNT	10/29/74 GENERA	COUNT
CHROOMONAS	618	NITZSCHIA	919	LYNGBYA	1277	CHLAMYDOMONAS	204
FLAGELLATES	172	CRYPTOMONAS	238	OSCILLATORIA	998	CHROOMONAS	204
ANKISTRODESMUS	137	CHLAMYDOMONAS	204	RAPHIDIOPSIS	399	CRYPTOMONAS	204
NITZSCHIA	137	CHROOMONAS	170	NITZSCHIA	399	CYCLOTELLA	58
CRYPTOMONAS	103	LYNGBYA	136	CRYPTOMONAS	319	GYMNODINIUM	58
OTHER	240	OTHER	410	OTHER	599	OTHER	291
TOTAL	1407	TOTAL	2077	TOTAL	3991	TOTAL	1019

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	170.	8345.	8515.
NITROGEN	**********	**********	6305.	229335.	235640.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2975.	65.	0.29
NITROGEN	85915.	64.	8.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
PECAN BAYOU	2.000	1623.9	0.031	1.446	1.	55.
JIM NED CREEK	2.000	1634.3	0.081	1.039	3.	45.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
MUD CREEK	0.063	1.122
MOUGH BRANCH	0.021	1.914

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COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE BUCHANAN (EUTROPHIC)
COUNTY - BURNET, LLANO
STORET NO. - 4806 WORKING PAPER NO. 636. NTIS ACCESSION NO. PB-268 303/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	20937.40	93.32	13.1	27.013	1.7

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
142.	642.	1.6	0.036	0.012	0.250	0.580

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
8.6	0.1 - 2.7 (2)	(3/14/74) P	(5/21/74) P	(8/16/74) NO DATA	(11/ 4/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/14/74 GENERA	COUNT	5/21/74 GENERA	COUNT	11/ 4/74 GENERA	COUNT
CHROOMONAS	1482	TETRAEDRON	453	FLAGELLATES	990
SCENEDESMUS	1284	SCENEDESMUS	316	STEPHANODISCUS	186
NITZSCHIA	889	CHROOMONAS	272	ANKISTRODESMUS	124
CENTRIC DIATOM	840	CRYPTOMONAS	181	CRYPTOMONAS	124
CRYPTOMONAS	543	NITZSCHIA	181	SCENEDESMUS	124
OTHER	1928	OTHER	647	OTHER	493
TOTAL	6966	TOTAL	2050	TOTAL	2041

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	35.	**********	325.	91510.	91870.
NITROGEN	100.	**********	12180.	1583845.	1596125.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	15995.	83.	0.98
NITROGEN	660840.	59.	17.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
COLORADO RIVER	22.890	79603.6	0.121	1.994	1.	18.
CALVERT CREEK	0.020	7.3	0.017	0.225	0.7	13.
FALL CREEK	0.240	132.1	0.014	0.500	0.9	36.
CHEROKEE CREEK	1.060	461.0	0.062	0.707	3.	52.
N. FORK MORGAN CREEK	0.100	46.6	0.010	0.746	0.8	52.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
S. FORK MORGAN CREEK	0.011	1.107

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - CADDO LAKE (EUTROPHIC)
COUNTY - CADDO, LAS MARION, HARRISON, TX
STORET NO. - 4807 WORKING PAPER NO. 637, NTIS ACCESSION NO. PB-270 033/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	7107.00	132.09	1.8	58.920	42.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
11.	114.	0.9	0.051	0.012	0.070	0.700

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
18.0	0.6 - 2.2 (3)	(3/23/74) N (5/31/74) N (8/26/74) NO DATA (11/11/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/23/74 GENERA	COUNT	5/31/74 GENERA	COUNT	6/ 3/74 GENERA	COUNT
MELOSIRA	4960	LYNGBYA	15979	LYNGBYA	18932
CHLAMYDOMONAS	1114	MELOSIRA	2527	MELOSIRA	5177
FLAGELLATES	861	DACTYLOCOCCOPSIS	1957	PENNATE DIATOMS	1923
RAPHIDIOPSIS	709	NITZSCHIA	1957	ANACYSTIS(MICROCYSTIS)	1331
NITZSCHIA	607	ANACYSTIS(MICROCYSTIS)	1141	MERISMOPEDIA	1035
OTHER	3493	OTHER	7255	OTHER	7543
TOTAL	11744	TOTAL	30816	TOTAL	35941

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3415.	**********	260.	93400.	97075.
NITROGEN	6380.	**********	9795.	1433455.	1449630.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	103390.	LOSS	0.73
NITROGEN	1775590.	LOSS	11.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HARRISON BAYOU	0.930	112.9	0.091	0.731	24.	192.
KITCHEN CREEK	0.730	88.8	0.038	0.618	10.	161.
CYPRESS BAYOU	46.050	5542.6	0.052	0.721	13.	190.
MONTEREY LAKE OUTLET	7.480	909.1	0.043	0.621	11.	162.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
TETE BAYOU	0.086	0.943
MILL CREEK	0.038	0.598
JAMES BAYOU	0.044	0.657
HUNTS CREEK	0.046	1.050
TIGER BRANCH	0.056	0.985

SAUNDERS BRANCH	0.062	0.637

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - CALAVERAS LAKE (EUTROPHIC)
COUNTY - BEXAR
STORET NO. - 4808

WORKING PAPER NO. 638. NTIS ACCESSION NO. PB-268 306/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	174.60	13.96	5.5	0.413	20.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
126.	562.	1.0	0.038	0.007	0.060	0.820

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
22.5	**********	(3/13/74) N (5/23/74) N (8/16/74) NO DATA (11/ 5/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/13/74 GENERA	COUNT	5/23/74 GENERA	COUNT	8/16/74 GENERA	COUNT	11/ 5/74 GENERA	COUNT
MERISMOPEDIA	3032	DACTYLOCOCCOPSIS	3190	OSCILLATORIA	2950	OSCILLATORIA	7756
CHROOMONAS	2592	NITZSCHIA	1202	LYNGBYA	2397	DACTYLOCOCCOPSIS	3283
DACTYLOCOCCOPSIS	2298	MERISMOPEDIA	1110	RAPHIDIOPSIS	1696	CENTRIC DIATOM	938
NITZSCHIA	1467	ANABAENOPSIS	833	MERISMOPEDIA	1217	RAPHIDIOPSIS	649
CRYPTOMONAS	1320	MELOSIRA	832	ANABAENOPSIS	1107	PENNATE DIATOMS	577
OTHER	9488	OTHER	6288	OTHER	7192	OTHER	2202
TOTAL	20197	TOTAL	13455	TOTAL	16559	TOTAL	15405

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	10550.	10550.
NITROGEN	**********	**********	**********	55455.	55455.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	175.	98.	0.76
NITROGEN	3245.	94.	4.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CALAVERAS CREEK	0.040	32.9	0.114	1.215	4.	47.
CHUPADERAS CREEK	0.030	20.7	0.069	1.219	3.	56.
UNNAMED STREAM	0.010	6.7	0.130	1.304	6.	61.
SAN ANTONIO R. DIVR.	0.180	**********	1.686	5.462	**********	**********

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - CANYON RESERVOIR (MESOTROPHIC)
COUNTY - COMAL
STORET NO. - 4809

WORKING PAPER NO. 639. NTIS ACCESSION NO. PB-268 382/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	3719.20	33.35	14.0	8.756	1.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
180.	373.	2.9	0.010	0.006	0.450	0.630

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
2.5	0.1 - 0.1 (2)	(3/13/74) P (5/22/74) P (8/15/74) NO DATA (11/ 5/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/13/74

GENERA	COUNT
CHROOMONAS	217
SYNEDRA	29
MALLOMONAS	14
NITZSCHIA	14
OTHER	1
TOTAL	275

5/22/74

GENERA	COUNT
CHROOMONAS	494
COELASTRUM	198
CRYPTOMONAS	99
CYCLOTELLA	99
DINOBRYON	49
OTHER	148
TOTAL	1087

8/15/74

GENERA	COUNT
CRYPTOMONAS	345
ANACYSTIS(MICROCYSTIS)	276
CHROOMONAS	242
TETRAEDRON	104
NAVICULA	69
OTHER	310
TOTAL	1346

11/ 5/74

GENERA	COUNT
CHROOMONAS	686
CRYPTOMONAS	172
DINOBRYON	103
SYNEDRA	103
CHLAMYDOMONAS	69
OTHER	102
TOTAL	1235

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	20.	5100.	5120.
NITROGEN	**********	**********	835.	489980.	490815.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3105.	39.	0.15
NITROGEN	174140.	65.	14.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
GUADALUPE RIVER	7.560	3405.8	0.016	1.516	1.	127.
REBECCA CREEK	0.146	28.2	0.011	0.461	2.	74.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE COLORADO CITY (EUTROPHIC)
COUNTY - MITCHELL
STORET NO. - 4810 WORKING PAPER NO. 640. NTIS ACCESSION NO. PB-268 338/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	834.00	6.52	6.0	0.336	3.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
141.	1640.	0.7	0.042	0.012	0.090	0.760

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
12.7	4.5	(3/ 4/74) N (5/15/74) P (8/ 6/74) NO DATA (10/28/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/ 4/74 GENERA	COUNT	5/15/74 GENERA	COUNT	8/ 6/74 GENERA	COUNT	10/28/74 GENERA	COUNT
DIPLONEIS	2140	TETRAEDRON	3283	OSCILLATORIA	10277	OSCILLATORIA	8779
OSCILLATORIA	2014	CHROOMONAS	1082	LYNGBYA	5755	NITZSCHIA	2287
FLAGELLATES	797	DIPLONEIS	830	NITZSCHIA	1953	DIPLONEIS	2164
SYNEDRA	545	SCENEDESMUS	722	OOCYSTIS	445	TETRAEDRON	1266
DACTYLOCOCCOPSIS	336	OOCYSTIS	721	CRYPTOMONAS	445	LYNGBYA	1255
OTHER	1972	OTHER	3102	OTHER	2501	OTHER	3605
TOTAL	7804	TOTAL	9740	TOTAL	21376	TOTAL	19356

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	115.	1275.	1390.
NITROGEN	**********	**********	4265.	21720.	25985.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1385.	0.	0.21
NITROGEN	16620.	36.	4.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MORGAN CREEK	0.280	709.7	0.104	1.386	1.	17.
UNNAMED STREAM	0.010	26.4	0.273	1.369	4.	18.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE CORPUS CHRISTI (EUTROPHIC)
COUNTY - JIM WELLS, LIVE OAK, SAN PATRICIO
STORET NO. - 4811 WORKING PAPER NO. 641. NTIS ACCESSION NO. PB-268 325/AH

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	43149.40	88.63	4.2	25.400	175.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
161.	972.	0.6	0.113	0.050	0.130	0.640

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
19.8	3.3	(3/12/74) N (5/21/74) N (8/14/74) NO DATA (11/ 5/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/12/74 GENERA	COUNT	5/21/74 GENERA	COUNT	8/14/74 GENERA	COUNT	11/ 5/74 GENERA	COUNT
MERISMOPEDIA	1330	CENTRIC DIATOM	1451	DIPLONEIS	766	DIPLONEIS	2781
SCENEDESMUS	1216	DIPLONEIS	747	DACTYLOCOCCOPSIS	468	CENTRIC DIATOM	526
CHROOMONAS	874	SCENEDESMUS	484	LYNGBYA	468	OOCYSTIS	301
KIRCHNERIELLA	874	MERISMOPEDIA	440	OSCILLATORIA	468	CHROOMONAS	188
ANACYSTIS(MICROCYSTIS)	836	ANABAENA	396	RAPHIDIOPSIS	383	CHLAMYDOMONAS	113
OTHER	5209	OTHER	2548	OTHER	2512	OTHER	901
TOTAL	10339	TOTAL	6066	TOTAL	5065	TOTAL	4810

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	8500.	**********	200.	204255.	212955.
NITROGEN	21110.	**********	7590.	1620175.	1648875.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	84990.	60.	2.40
NITROGEN	611415.	63.	18.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
NUECES RIVER	24.470	41559.5	0.170	2.477	5.	35.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE DIVERSION (EUTROPHIC)
COUNTY - ARCHER, BAYLOR
STORET NO. - 4812 WORKING PAPER NO. 642. NTIS ACCESSION NO. PB-268 356/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	5710.90	13.84	3.7	4.258	156.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
81.	4530.	0.8	0.025	0.009	0.080	0.525

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
15.9	0.1	(5/13/74) P	(8/ 8/74) P	(10/28/74) N

SUMMARY OF PHYTOPLANKTON DATA

5/13/74 GENERA	COUNT	8/ 8/74 GENERA	COUNT	10/28/74 GENERA	COUNT
SCENEDESMUS	1546	APHANIZOMENON	4607	NITZSCHIA	1444
MERISMOPEDIA	579	OSCILLATORIA	3694	OSCILLATORIA	903
OSCILLATORIA	483	LYNGBYA	1470	OOCYSTIS	650
OOCYSTIS	386	MERISMOPEDIA	1191	DIPLONEIS	289
CHROOMONAS	290	CHROOMONAS	357	CHROOMONAS	72
OTHER	1450	OTHER	1470	OTHER	218
TOTAL	4734	TOTAL	12789	TOTAL	3576

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	40.	4540.	4580.
NITROGEN	**********	**********	1470.	116995.	118465.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3579.	22.	0.33
NITROGEN	91090.	23.	8.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WICHITA RIVER	3.710	5402.7	0.032	0.760	0.7	16.
SPRING CREEK	0.120	35.5	0.120	1.540	3.*	80.*

* ESTIMATED

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - EAGLE MOUNTAIN LAKE (MESO-EUTROPHIC)
COUNTY - TARRANT, WISE
STORET NO. - 4913 WORKING PAPER NO. 643. NTIS ACCESSION NO. PB-268 326/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	5102.30	36.42	6.4	6.100	363.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
195.	387.	0.8	0.024	0.008	0.070	0.420

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
5.7	••••••••••	(3/ 7/74) P AND N (5/16/74) N (8/13/74) P AND N (10/30/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/ 7/74 GENERA	COUNT	5/16/74 GENERA	COUNT	8/13/74 GENERA	COUNT	10/30/74 GENERA	COUNT
STEPHANODISCUS	606	NITZSCHIA	928	NITZSCHIA	207	MELOSIRA	306
CHROOMONAS	572	CHLOROPHYTAN FILAMENTS	898	TRACHELOMONAS	148	CHROOMONAS	275
FLAGELLATES	337	MELOSIRA	210	MELOSIRA	118	CYCLOTELLA	275
ANKISTRODESMUS	269	MERISMOPEDIA	210	ANABAENOPSIS	89	NITZSCHIA	244
DACTYLOCOCCOPSIS	236	FLAGELLATES	180	LYNGBYA	84	MERISMOPEDIA	183
OTHER	1044	OTHER	898	OTHER	325	OTHER	886
TOTAL	3084	TOTAL	3324	TOTAL	976	TOTAL	2169

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1755.	••••••••••	165.	53200.	55120.
NITROGEN	3880.	••••••••••	6290.	433860.	444030.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	9390.	83.	1.51
NITROGEN	236250.	47.	12.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WEST FORK TRINITY RIVER	6.500	4581.7	0.195	1.416	10.	74.
ASH CREEK	0.210	58.3	0.165	0.952	19.	109.
WALNUT CREEK	0.420	147.0	0.159	1.541	10.	148.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
INDIAN CREEK	0.042	1.071

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE FORT PHANTOM HILL (EUTROPHIC)
COUNTY - JONES
STORET NO. - 4814 WORKING PAPER NO. 644. NTIS ACCESSION NO. PB-269 235/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	1238.00	10.93	5.6	1.198	2.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
165.	654.	0.6	0.060	0.022	0.105	0.560

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
6.3	6.2	(3/ 6/74) N	(5/15/74) N	(8/ 5/74) N	(10/30/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/ 6/74 GENERA	COUNT	5/15/74 GENERA	COUNT	8/ 5/74 GENERA	COUNT	10/30/74 GENERA	COUNT
CHROOMONAS	706	CHROOMONAS	743	COSCINODISCUS	3378	CHROOMONAS	803
SELENASTRUM	445	ANACYSTIS(MICROCYSTIS)	496	CHROOMONAS	622	OOCYSTIS	223
ANACYSTIS(MICROCYSTIS)	131	CRYPTOMONAS	212	CHLAMYDOMONAS	445	CHLAMYDOMONAS	178
CRYPTOMONAS	105	CENTRIC DIATOM	177	ZOOSPORES	356	CENTRIC DIATOM	178
DACTYLOCOCCOPSIS	78	EUGLENA	177	MERISMOPEDIA	267	ANACYSTIS(MICROCYSTIS)	134
OTHER	183	OTHER	744	OTHER	1022	OTHER	402
TOTAL	1648	TOTAL	2549	TOTAL	6090	TOTAL	1918

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	125.	3900.	4025.
NITROGEN	**********	**********	4700.	86950.	91650.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1550.	61.	0.37
NITROGEN	25050.	73.	8.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ELM CREEK	0.200	644.9	0.087	1.643	0.9	16.
CEDAR CREEK	0.130	414.4	0.113	1.603	1.	16.
CLEAR FK BRAZOS R. DIVR.	0.240	**********	0.130	3.414	**********	**********

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
BUCK CREEK	0.049	2.202

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE LYNDON B. JOHNSON (EUTHUPHIC)
COUNTY - BURNET, LLANO
STORET NO. - 4821 WORKING PAPER NO. 645. NTIS ACCESSION NO. PB-269 263/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	93991.10	25.80	6.7	37.430	56.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
133.	455.	1.1	0.042	0.013	0.420	0.850

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
8.1	0.1 - 1.1 (2)	(3/13/74) P (5/21/74) P (8/16/74) NO DATA (11/ 4/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/13/74 GENERA	COUNT	5/21/74 GENERA	COUNT	11/ 4/74 GENERA	COUNT
SCENEDESMUS	299	FLAGELLATES	1304	CRYPTOMONAS	188
DACTYLUCOCCOPSIS	256	CRUCIGENIA	783	MELOSIRA	125
CENTRIC DIATOM	214	CENTRIC DIATOM	783	STEPHANODISCUS	125
SYNEDRA	128	NITZSCHIA	522	PENNATE DIATOMS	125
CRYPTOMONAS	128	SCENEDESMUS	456	SCENEDESMUS	31
OTHER	214	OTHER	2413	OTHER	2
TOTAL	1234	TOTAL	6261	TOTAL	596

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	10665.	**********	465.	19875.	35985.
NITROGEN	49310.	**********	17390.	931600.	998300.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	34979.	3.	1.39
NITROGEN	1092865.	LOSS	38.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SHICKHOCK CREEK	0.050	23.3	0.011	0.815	0.6	34.
WALNUT CREEK	0.130	63.5	0.013	0.591	0.9	35.
SANDY CREEK	1.070	846.4	0.029	0.440	2.	23.
MURRY CREEK	0.210	100.0	0.011	0.640	0.7	32.
LLANO RIVER	9.660	11473.7	0.024	1.354	0.1	21.
COLUHADO RIVER	22.170	81092.8	0.025	1.001	0.2	8.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
PETERS CREEK	0.012	0.513

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE KEMP (EUTROPHIC)
COUNTY - BAYLOR
STORET NO. - 4816 WORKING PAPER NO. 646. NTIS ACCESSION NO. PB-268 283/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	5402.70	62.17	5.3	5.420	2.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
88.	3880.	1.1	0.023	0.007	0.110	0.510

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
10.2	0.1	(3/ 6/74) P	(5/13/74) P	(8/ 8/74) P	(10/28/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/ 6/74 GENERA	COUNT	5/13/74 GENERA	COUNT	8/ 8/74 GENERA	COUNT	10/28/74 GENERA	COUNT
CHROOMONAS	1057	OOCYSTIS	670	ANABAENOPSIS	10492	OSCILLATORIA	2008
OOCYSTIS	88	CENTRIC DIATOM	530	OSCILLATORIA	2469	ANABAENOPSIS	1121
		OSCILLATORIA	433	PENNATE DIATOMS	1234	DIPLONEIS	327
		ANACYSTIS(MICROCYSTIS)	389	OOCYSTIS	823	LYNGBYA	234
		SCENEDESMUS	337	LYNGBYA	729	PENNATE DIATOMS	187
OTHER	0	OTHER	2674	OTHER	1440	OTHER	373
TOTAL	1145	TOTAL	4833	TOTAL	17178	TOTAL	4250

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	215.	12025.	12240.
NITROGEN	**********	**********	8140.	207795.	215935.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3745.	69.	0.20
NITROGEN	88920.	59.	3.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WICHITA RIVER	5.050	4853.7	0.064	0.823	2.	27.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE HOUSTON (EUTROPHIC)
COUNTY - HARRIS
STORET NO. - 4817 WORKING PAPER NO. 647. NTIS ACCESSION NO. PB-269 204/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	7324.50	49.53	3.7	44.730	55.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
31.	222.	0.3	0.097	0.036	0.200	0.980

III. BIOLOGICAL CHARACTERISTICS (LAPE)

MEAN CHLOROPHYLL A (UG/L): 16.8
ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT): 4.4
LIMITING NUTRIENT AT SAMPLING TIME: (3/18/74) P AND N (5/23/74) P AND N (8/19/74) NO DATA (11/ 6/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/18/74 GENERA	COUNT	5/23/74 GENERA	COUNT	8/19/74 GENERA	COUNT	11/ 6/74 GENERA	COUNT
MELOSIRA	2173	CRYPTOMONAS	313	CRYPTOMONAS	506	CRYPTOMONAS	108
CHROOMONAS	730	ANKISTRODESMUS	251	CHROOCOCCUS	547	DACTYLOCOCCOPSIS	72
CYCLOTELLA	681	STEPHANODISCUS	251	OSCILLATORIA	199	ANKISTRODESMUS	36
CHROOCOCCUS	402	FLAGELLATES	180	STEPHANODISCUS	180	OOCYSTIS	36
NAVICULOPSIS	277	ACTINASTRUM	125	PANDORINA	180	OSCILLATORIA	36
OTHER	1574	OTHER	1051	OTHER	214	OTHER	180
TOTAL	5826	TOTAL	2170	TOTAL	1756	TOTAL	468

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	149259.	**********	**********	158419.	307678.
NITROGEN	439605.	**********	**********	1788970.	2228575.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	171459.	44.	6.13
NITROGEN	1779319.	19.	44.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WEST FK, SAN JACINTO R.	18.070	2095.0	0.148	1.171	40.	319.
CYPRESS CREEK	4.200	782.2	1.172	2.911	9.*	134.*
SPRING CREEK	5.570	1059.3	0.182	1.263	30.	296.
CANEY CREEK	2.730	393.7	0.072	1.306	19.	295.
PEACH CREEK	2.600	404.9	0.067	1.198	10.	293.
EAST FK, SAN JACINTO R.	6.820	971.2	0.078	1.232	11.	255.
LUCE BAYOU	3.000	461.0	0.086	1.905	19.	411.
UNNAMED STREAM	0.340	53.4	0.095	1.481	29.	295.

* ESTIMATED

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE O' THE PINES (EUTHOPHIC)
COUNTY - CAMP, MARION, MORRIS, UPSHUR
STORET NO. - 4814 WORKING PAPER NO. 648. NTIS ACCESSION NO. PB-269 242/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	2201.50	75.27	4.1	17.418	221.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
21.	135.	1.5	0.031	0.011	0.090	0.538

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
12.9	0.0	(3/22/74) N (5/31/74) P AND N (8/23/74) NO DATA (11/ 8/74) N

SUMMARY OF PHYTOPLANKTON DATA

5/31/74 GENERA	COUNT	11/ 8/74 GENERA	COUNT
CHROOMONAS	1907	MELOSIRA	603
NITZSCHIA	974	CRYPTOMONAS	265
CYCLOTELLA	682	SCENEDESMUS	214
ASTERIONELLA	682	CHROOMONAS	184
MELOSIRA	682	ANKISTRODESMUS	153
OTHER	2189	OTHER	489
TOTAL	7156	TOTAL	1928

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	18930.	**********	95.	45600.	64625.
NITROGEN	53765.	**********	3525.	665815.	723105.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	16819.	74.	0.86
NITROGEN	388395.	46.	9.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
JONES CREEK	0.240	15.9	0.025	0.524	12.	269.
ELLISON CR. RES. OUTLET	1.280	95.8	0.029	1.276	12.	581.
SWEASY CREEK	1.120	77.2	0.049	0.649	22.	317.
BOGGY CREEK	1.540	233.1	0.097	0.963	29.	291.
SWAUANO CREEK	0.790	60.1	0.079	0.867	32.	367.
BIG CYPRESS CREEK	4.130	967.9	0.170	1.520	24.	282.
JOHNSON CR. RES. OUTLET	0.430	28.5	0.026	0.971	8.	446.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
COPELAND CREEK	0.032	0.564
AMES CREEK	0.031	0.469

LITTLE CREEK	0.033	0.695
PRAIRIE CREEK	0.098	1.400
WILLIAMSON CREEK	0.075	1.081
DRY CREEK *	1.519	3.868
ALLEY CREEK	0.027	0.401

* BELOW POINT SOURCE.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE LAVON (EUTROPHIC)
COUNTY - COLLIN
STORET NO. - 4819 WORKING PAPER NO. 649. NTIS ACCESSION NO. PB-268 309/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	1994.30	86.43	6.5	13.452	1.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
133.	330.	0.4	0.063	0.018	0.180	0.410

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
5.4	••••••••••	(3/ 8/74) P AND N (5/20/74) P (8/12/74) P AND N (10/31/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/ 8/74 GENERA	COUNT	5/20/74 GENERA	COUNT	8/12/74 GENERA	COUNT	10/31/74 GENERA	COUNT
MELOSIRA	559	MELOSIRA	166	MELOSIRA	566	MELOSIRA	1334
CENTRIC DIATOM	473	CRYPTOMONAS	124	OOCYSTIS	119	STEPHANODISCUS	714
CHROOMONAS	301	STEPHANODISCUS	124	STEPHANODISCUS	30	CHROOMONAS	48
DACTYLOCOCCOPSIS	129	CHROOMONAS	83	CLOSTERIUM	30		
ANABAENA	43	CHLOROPHYTAN CELLS	41	CHROOMONAS	30		
OTHER	87	OTHER	0	OTHER	59	OTHER	0
TOTAL	1592	TOTAL	538	TOTAL	834	TOTAL	2096

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	27260.	••••••••••	80.	61365.	88705.
NITROGEN	59550.	••••••••••	3100.	808465.	871115.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	20000.	77.	1.03
NITROGEN	395285.	55.	10.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
EAST FORK TRINITY RIVER	4.230	536.1	0.234	2.083	54.	513.
WHITE ROCK CREEK	0.150	18.1	0.026	2.241	7.	576.
WILSON CREEK	2.050	295.3	0.445	2.665	37.	453.
SISTER GROVE CREEK	1.940	292.7	0.098	1.445	18.	301.
PILOT GROVE CREEK	3.410	507.6	0.115	1.301	21.	272.
INDIAN CREEK	0.830	115.3	0.036	0.713	15.*	383.*

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
ELM CREEK	0.284	2.008
ARNOLD CREEK	0.109	0.876

* ESTIMATED

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE LEWISVILLE (EUTROPHIC)
COUNTY - DENTON
STORET NO. - 4815 WORKING PAPER NO. 650. NTIS ACCESSION NO. PB-268 288/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	4299.40	93.93	6.0	17.507	0.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
113.	320.	0.6	0.045	0.018	0.380	0.655

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
14.2	0.1 - 0.2 (2)	(3/11/74) P (5/17/74) P AND N (8/12/74) P AND N (10/31/74) P AND N

SUMMARY OF PHYTOPLANKTON DATA

3/11/74 GENERA	COUNT	5/17/74 GENERA	COUNT	8/12/74 GENERA	COUNT	10/31/74 GENERA	COUNT
CHROOMONAS	87	CHROOMONAS	308	RAPHIDIOPSIS	1627	CRYPTOMONAS	30
STEPHANODISCUS	65	CRYPTOMONAS	154	SYNEDRA	757	SCENEDESMUS	30
CRYPTOMONAS	43	CERATIUM	51	CENTRIC DIATOM	568	CHRYSOPHYTAN CELLS	30
		EUGLENA	51	LYNGBYA	530		
		MERISMOPEDIA	51	OSCILLATORIA	530		
OTHER	0	OTHER	206	OTHER	605	OTHER	0
TOTAL	195	TOTAL	821	TOTAL	4617	TOTAL	90

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	34060.	**********	**********	83045.	117105.
NITROGEN	175260.	**********	**********	871470.	1046730.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	36980.	68.	1.25
NITROGEN	329400.	69.	11.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ELM FORK TRINITY RIVER	4.080	985.8	0.270	2.226	35.	290.
CLEAR CREEK	2.100	764.0	0.080	0.941	7.	82.
ISLE DU BOIS CREEK	3.520	688.9	0.143	1.386	23.	223.
LITTLE ELM CREEK	1.140	195.5	0.276	1.988	45.	360.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
BUCK CREEK (K-1)	0.239	1.952
BUCK CREEK (L-1)	0.207	1.735
HICKORY CREEK	0.145	1.689
HOG CREEK	0.108	1.544
RANGE CREEK (G-1)	0.208	1.640

RANGE CREEK (J-1)	0.209	1.704

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LIVINGSTON RESERVOIR (EUTROPHIC)
COUNTY - POLK, SAN JACINTO, TRINITY, WALKER
STORET NO. - 4820 WORKING PAPER NO. 651. NTIS ACCESSION NO. PB-268 393/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	42950.00	334.28	6.5	191.576	130.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
AV.	176.	0.9	0.196	0.128	0.555	1.310

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
16.1	1.2 - 23.0 (2)	(3/16/74) N (5/24/74) N (8/19/74) NO DATA (11/ 6/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/16/74 GENERA	COUNT	5/24/74 GENERA	COUNT	8/19/74 GENERA	COUNT	11/ 6/74 GENERA	COUNT
CYCLOTELLA	5017	CENTRIC DIATOM	9691	DACTYLOCOCCOPSIS	7832	STEPHANODISCUS	521
MELOSIRA	1836	MERISMOPEDIA	1088	CYCLOTELLA	6633	MELOSIRA	137
STEPHANODISCUS	1236	CARTERIA	916	MERISMOPEDIA	6562	CRYPTOMONAS	137
CHROOMONAS	763	CHROOMONAS	687	OSCILLATORIA	5151	OSCILLATORIA	82
SYNEDRA	473	MELOSIRA	686	NAPHIDIOPSIS	3669	DACTYLOCOCCOPSIS	82
OTHER	363	OTHER	2443	OTHER	2752	OTHER	138
TOTAL	9688	TOTAL	15491	TOTAL	32599	TOTAL	1097

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	42240.	**********	30.	2106290.	2148560.
NITROGEN	118460.	**********	1110.	12252075.	12371645.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	923050.	57.	6.43
NITROGEN	7703650.	38.	37.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
TRINITY RIVER	173.930	39943.0	0.379	2.146	52.	292.
PALMETTO CREEK	0.190	52.3	0.029	0.726	4.	90.
EAST CAROLINA CREEK	0.120	31.6	0.021	0.770	3.	94.
HARMON CREEK	0.500	114.0	1.211	3.404	3.*	90.*
ROCKY CREEK	0.460	100.8	0.028	0.790	4.	114.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
WEST CAROLINA CREEK	0.067	0.911
CHALK CREEK	0.026	0.715
KICKAPOO CREEK	0.094	0.896

* ESTIMATED

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - MEDINA LAKE (MESO-EUTROPHIC)
COUNTY - BANDERA, MEDINA
STORET NO. - 4822 WORKING PAPER NO. 652. NTIS ACCESSION NO. PB-268 297/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	1642.10	22.56	13.9	4.490	2.7

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
179.	384.	2.4	0.010	0.004	0.600	0.780

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
12.9	0.1	(3/12/74) P (5/22/74) P (8/15/74) NO DATA (11/ 5/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/12/74 GENERA	COUNT	5/22/74 GENERA	COUNT	8/15/74 GENERA	COUNT	11/ 5/74 GENERA	COUNT
DINOBRYON	1320	ANACYSTIS(MICHOCYSTIS)	607	ANACYSTIS(MICHOCYSTIS)	590	CRYPTOMONAS	131
CHROOMONAS	543	FRAGILARIA	580	CHLOROPHYTAN FILAMENTS	461	APHANOTHECE	33
COELASTRUM	311	COELASTRUM	359	SCENEDESMUS	264	CLOSTERIUM	33
FRAGILARIA	272	CYCLOTELLA	193	CHROOMONAS	198	DACTYLOCOCCOPSIS	33
CYCLOTELLA	233	CHLOROPHYTAN FILAMENTS	166	CYCLOTELLA	198	FLAGELLATES	33
OTHER	427	OTHER	663	OTHER	858	OTHER	0
TOTAL	3106	TOTAL	2568	TOTAL	2569	TOTAL	263

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1135.	**********	125.	1625.	2885.
NITROGEN	3400.	**********	4745.	202275.	210420.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1160.	60.	0.13
NITROGEN	87290.	59.	9.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MEDINA RIVER	3.510	1227.7	0.018	1.313	0.7	116.
RED BLUFF CREEK	0.310	145.8	0.010	1.960	0.7	131.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
ELM CREEK	0.010	3.444
WEST PRONG, MEDINA RIVER	0.013	0.796

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE MEREDITH (MESOTROPHIC)
COUNTY - HUTCHINSON, MOORE, POTTER
STORET NO. - 4823 WORKING PAPER NO. 653. NTIS ACCESSION NO. PB-268 302/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	41564.30	66.77	16.0	6.884	8.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
188.	1538.	1.5	0.021	0.009	0.070	0.435

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
3.0	**********	(3/ 5/74) N (5/14/74) P AND N (8/ 7/74) P AND N (10/28/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/ 5/74 GENERA	COUNT	5/14/74 GENERA	COUNT	8/ 7/74 GENERA	COUNT
CHROOMONAS	734	OOCYSTIS	801	CHROOMONAS	286
OOCYSTIS	341	NITZSCHIA	615	CRYPTOMONAS	82
FLAGELLATES	262	BINUCLEARIA	476	COELASTRUM	41
CRYPTOMONAS	105	CHROOMONAS	450	ANACYSTIS(MICROCYSTIS)	20
STEPHANODISCUS	52	STEPHANODISCUS	316	OOCYSTIS	20
OTHER	105	OTHER	530	OTHER	62
TOTAL	1599	TOTAL	3188	TOTAL	511

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	123605.	**********	**********	304350.	427955.
NITROGEN	370710.	**********	**********	1258360.	1629070.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1880.	100.	6.41
NITROGEN	75185.	95.	24.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CANADIAN RIVER	6.290	39823.8	2.150	7.800	8.	30.
BONITA CREEK	0.060	166.8	0.019	0.595	0.2	6.
BIG BLUE CREEK	0.250	665.6	0.016	0.571	0.2	7.
HUGHES CREEK	0.010	19.7	0.016	0.731	0.3	6.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - PALESTINE RESERVOIR (EUTROPHIC)
COUNTY - ANDERSON, CHEROKEE, HENDERSON, SMITH
STORET NO. - 4824 WORKING PAPER NO. 654. NTIS ACCESSION NO. PB-269 245/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	2201.50	103.44	4.9	12.616	1.3

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
24.	148.	1.5	0.031	0.010	0.180	0.660

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
10.6	1.9	(3/ 9/74) P AND N (5/17/74) P AND N (8/13/74) NO DATA (11/ 1/74) P AND N

SUMMARY OF PHYTOPLANKTON DATA

3/ 9/74 GENERA	COUNT	5/17/74 GENERA	COUNT	8/13/74 GENERA	COUNT	11/ 1/74 GENERA	COUNT
MELOSIRA	1452	MELOSIRA	1032	DACTYLOCOCCOPSIS	1297	MELOSIRA	947
CHROOMONAS	881	CHROOMONAS	534	MELOSIRA	605	DACTYLOCOCCOPSIS	245
CRYPTOMONAS	674	DACTYLOCOCCOPSIS	138	CRYPTOMONAS	577	COCCOID CELLS	105
ANACYSTIS(MICROCYSTIS)	441	ANACYSTIS(MICROCYSTIS)	138	PENNATE DIATOMS	568	NITZSCHIA	105
ANKISTRODESMUS	285	CRUCIGENIA	129	RAPHIDIOPSIS	490	ANACYSTIS(MICROCYSTIS)	35
OTHER	907	OTHER	688	OTHER	1585	OTHER	210
TOTAL	4640	TOTAL	2650	TOTAL	5102	TOTAL	1647

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	45830.	**********	**********	23825.	69655.
NITROGEN	137430.	**********	**********	404130.	541560.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	8995.	87.	0.67
NITROGEN	231505.	57.	5.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
NECHES RIVER	2.080	564.6	1.055	3.176	8.	88.
FLAT CREEK	1.150	170.9	0.063	0.719	12.	160.
KICKAPOO CREEK	3.730	680.9	0.084	0.760	11.	100.
INDIAN CREEK	0.480	40.1	0.051	0.516	10.	114.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - POSSUM KINGDOM RESERVOIR (MESO-EUTROPHIC)
COUNTY - PALO PINTO, STEPHENS, YOUNG
STORET NO. - 4865 WORKING PAPER NO. 655. NTIS ACCESSION NO. PB-264 337/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	58404.50	80.13	11.2	28.590	1.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
103.	3517.	2.1	0.023	0.009	0.070	0.520

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
9.5	**********	(3/ 8/74) N (5/16/74) P AND N (8/ 9/74) P AND N (10/30/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/ 8/74 GENERA	COUNT	5/16/74 GENERA	COUNT	8/ 9/74 GENERA	COUNT	10/30/74 GENERA	COUNT
CHROOMONAS	1391	CHROOMONAS	778	LYNGBYA	3649	OSCILLATORIA	6224
OOCYSTIS	1089	TETRAEDRON	733	ANABAENOPSIS	1622	DACTYLOCOCCOPSIS	2948
SCENEDESMUS	514	CARTERIA	412	RAPHIDIOPSIS	838	CHROOMONAS	837
ANKISTRODESMUS	91	OOCYSTIS	366	MERISMOPEDIA	595	OOCYSTIS	455
PENNATE DIATOMS	60	ANKISTRODESMUS	183	ANABAENA	378	RAPHIDIOPSIS	437
OTHER	121	OTHER	458	OTHER	1540	OTHER	1093
TOTAL	3266	TOTAL	2930	TOTAL	8622	TOTAL	12194

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	8930.	**********	255.	207480.	216665.
NITROGEN	20819.	**********	9535.	1596285.	1632135.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	29835.	86.	2.70
NITROGEN	1006165.	38.	20.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BRAZOS RIVER	25.020	56736.5	0.297	1.627	3.	24.
CEDAR CREEK	0.890	347.1	0.125	1.456	8.	132.
ROCK CREEK	0.670	274.5	0.080	1.117	4.	90.

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN TEXAS

NAME - O. C. FISHER (EUTHOPHIC)
COUNTY - TOM GREEN
STORET NO. - 4826 WORKING PAPER NO. 656. NTIS ACCESSION NO. PB-268 282/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	3853.90	21.85	6.5	0.790	11.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
154.	459.	0.5	0.098	0.011	0.140	0.995

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
24.7	5.2	(3/ 4/74) N (5/15/74) P (8/ 5/74) NO DATA (10/29/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/ 4/74 GENERA	COUNT	5/15/74 GENERA	COUNT	8/ 5/74 GENERA	COUNT	10/29/74 GENERA	COUNT
NITZSCHIA	9005	NITZSCHIA	3289	OSCILLATORIA	25208	CHLAMYDOMONAS	3512
ANKISTRODESMUS	4407	CYCLOTELLA	2386	RHOICOSPHENIA	10905	CYCLOTELLA	1115
CHROOMONAS	2810	RHOICOSPHENIA	1172	DACTYLOCOCCOPSIS	8355	CRYPTOMONAS	725
DACTYLOCOCCOPSIS	2363	SCENEDESMUS	902	PENNATE DIATOMS	5381	CHROOMONAS	502
KIRCHNERIELLA	2299	STEPHANODISCUS	901	MERISMOPEDIA	3044	NITZSCHIA	502
OTHER	9265	OTHER	7119	OTHER	19332	OTHER	2005
TOTAL	30149	TOTAL	15771	TOTAL	72225	TOTAL	8361

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	1395.	1395.
NITROGEN	••••••••••	••••••••••	••••••••••	69910.	69910.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1160.	17.	0.06
NITROGEN	13070.	81.	3.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
NORTH CONCHO RIVER	0.670	3234.9	0.042	1.948	0.3	13.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - SAM RAYBURN RESERVOIR (EUTROPHIC)
COUNTY - ANGELINA, JASPER, NACOGDOCHES, SABINE, SAN AUGUSTINE
STORET NO. - 4827 WORKING PAPER NO. 657, NTIS ACCESSION NO. PB-268 310/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	8932.90	463.48	7.7	43.440	1.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
24.	143.	1.5	0.029	0.009	0.150	0.600

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
6.1	••••••••••	(3/18/74) P AND N	(5/24/74) P	(8/23/74) N	(11/ 8/74) P AND N

SUMMARY OF PHYTOPLANKTON DATA

3/18/74 GENERA	COUNT	5/24/74 GENERA	COUNT	8/23/74 GENERA	COUNT	11/ 8/74 GENERA	COUNT
MELOSIRA	2395	CHROOMONAS	627	DACTYLOCOCCOPSIS	7930	CHROOMONAS	1204
CHROOMONAS	629	MELOSIRA	297	LYNGBYA	1478	MELOSIRA	339
CRYPTOMONAS	169	CRYPTOMONAS	165	ANABAENOPSIS	1034	CRYPTOMONAS	113
NITZSCHIA	145	STEPHANODISCUS	165	MELOSIRA	198	DACTYLOCOCCOPSIS	113
CENTRIC DIATOM	145	SYNEDRA	132	SYNEDRA	197	SCENEDESMUS	113
OTHER	340	OTHER	659	OTHER	394	OTHER	149
TOTAL	3823	TOTAL	2045	TOTAL	11231	TOTAL	2031

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	29525.	••••••••••	35.	111495.	140855.
NITROGEN	86375.	••••••••••	1300.	1000345.	1092020.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	88910.	42.	0.30
NITROGEN	1956389.	0.	3.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ANGELINA RIVER	23.100	6618.0	0.109	0.980	14.	109.
BAYOU CARRIZO	0.500	211.3	0.972	8.904	9.	84.
ATTOYAC BAYOU	9.070	1382.8	0.092	0.878	20.	193.
AYISH BAYOU	1.050	301.9	0.071	0.703	2.	72.
MCKIM CREEK	0.200	74.5	0.030	0.555	3.	69.
HAPPYHILL CREEK	0.100	28.5	0.230	2.680	11.	99.
PUMPKINHOW CREEK	0.200	35.7	0.239	1.699	38.	329.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
ALMADENOS CREEK	0.056	0.438
MILL CREEK	0.019	0.568

ROCK CREEK	0.015	0.545
WEST PRONG MCKIM CREEK	0.017	0.597
EAST PRONG MCKIM CREEK	0.013	0.586
RABBIT CREEK	0.059	0.765
SANDY CREEK	0.065	0.756
HARVEY CREEK	0.073	0.705

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - E. V. SPENCE RESERVOIR (EUTROPHIC)
COUNTY - COKE
STORET NO. - 4828 WORKING PAPER NO. 658. NTIS ACCESSION NO. PB-268 283/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	10786.60	25.62	6.7	2.059	7.1

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
135.	1970.	0.9	0.036	0.000	0.000	0.630

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
11.8	**********	(3/ 6/70) N (5/15/70) P (8/ 5/70) NO DATA (10/29/70) P AND N

SUMMARY OF PHYTOPLANKTON DATA

3/ 6/70 GENERA	COUNT	8/ 5/70 GENERA	COUNT	10/29/70 GENERA	COUNT
TETRAEDRON	2407	OSCILLATORIA	13345	OSCILLATORIA	13268
SCENEDESMUS	2295	RAPHIDIOPSIS	9937	DACTYLOCOCCOPSIS	8761
CRYPTOMONAS	263	LYNGBYA	3891	TETRAEDRON	1732
CHROOMONAS	226	DACTYLOCOCCOPSIS	2243	RAPHIDIOPSIS	887
SYNEDRA	189	TETRAEDRON	2130	OOCYSTIS	587
OTHER	614	OTHER	2626	OTHER	2958
TOTAL	5793	TOTAL	29672	TOTAL	29113

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	14129.	14129.
NITROGEN	**********	**********	**********	118660.	118660.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	720.	95.	0.55
NITROGEN	149656.	87.	4.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
COLORADO RIVER	1.830	48124.3	0.230	1.449	0.3	2.
POINT CREEK	0.010	67.0	0.050	1.030	0.8	16.

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN TEXAS

NAME - SOMERVILLE LAKE (EUTHOPHIC)
COUNTY - BURLESON, LEE, WASHINGTON
STORET NO. - 4829 WORKING PAPER NO. 459, NTIS ACCESSION NO. PB-268 296/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	2610.70	44.38	4.3	7.820	0.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN ORTHO P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
46.	395.	0.7	0.053	0.013	0.115	0.720

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
24.5	2.1 - 3.7 (2)	(3/16/76) P (5/23/76) P (8/16/76) NO DATA (11/ 6/76) N

SUMMARY OF PHYTOPLANKTON DATA

3/16/76

GENERA	COUNT
NITZSCHIA	2688
MELOSIRA	1613
CHROOMONAS	1559
MERISMOPEDIA	1236
ANACYSTIS(MICROCYSTIS)	753
OTHER	5428
TOTAL	13277

5/23/76

GENERA	COUNT
CARTERIA	7682
NITZSCHIA	906
OSCILLATORIA	584
MERISMOPEDIA	409
MELOSIRA	388
OTHER	2915
TOTAL	11976

8/16/76

GENERA	COUNT
OSCILLATORIA	35327
MERISMOPEDIA	5815
LYNGBYA	4615
STEPHANODISCUS	3098
OTHER	2665
TOTAL	15441
	66761

11/ 6/76

GENERA	COUNT
OSCILLATORIA	1580
DACTYLOCOCCOPSIS	453
MERISMOPEDIA	198
LYNGBYA	170
STEPHANODISCUS	170
OTHER	1219
TOTAL	3790

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3760.	**********	90.	21250.	25015.
NITROGEN	11255.	**********	210.	426675.	438140.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	16835.	33.	0.54
NITROGEN	276600.	37.	9.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MIDDLE YEGUA CREEK	2.820	1131.4	0.047	1.283	7.	101.
EAST YEGUA CREEK	1.500	716.8	0.066	1.336	4.	88.
NAILS CREEK	0.990	141.6	0.132	1.489	14.	230.
CEDAR CREEK	0.710	123.3	0.053	1.298	10.	227.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
FOURMILE CREEK	0.031	1.016

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE STAMFORD (EUTROPHIC)
COUNTY - HASKELL
STORET NO. - 4830 WORKING PAPER NO. 660. NTIS ACCESSION NO. PB-268 330/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CFS)	RETENTION TIME (YEARS)
IMPOUNDMENT	932.40	19.00	3.5	1.511	2.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
184.	1104.	0.4	0.073	0.012	0.060	0.920

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME			
18.5	**********	(3/ 7/74) N	(5/15/74) N	(8/ 5/74) N	(10/28/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/ 7/74 GENERA	COUNT	5/15/74 GENERA	COUNT	8/ 5/74 GENERA	COUNT	10/28/74 GENERA	COUNT
ANKISTRODESMUS	1327	CENTRIC DIATOM	2563	OSCILLATORIA	2239	DIPLONEIS	4888
CRUCIGENIA	601	ANACYSTIS(MICROCYSTIS)	1923	LYNGBYA	2183	OSCILLATORIA	2732
LUNATE CELLS	526	DIPLONEIS	838	RAPHIDIOPSIS	1567	DACTYLOCOCCOPSIS	1629
DACTYLOCOCCOPSIS	351	CHROOMONAS	739	ANABAENOPSIS	1119	CUSCINODISCUS	1534
CHROOMONAS	200	ANKISTRODESMUS	345	CRYPTOMONAS	1007	CHROOMONAS	1246
OTHER	677	OTHER	1085	OTHER	2910	OTHER	1869
TOTAL	3682	TOTAL	7493	TOTAL	11025	TOTAL	13698

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	9225.	**********	50.	18150.	27425.
NITROGEN	28695.	**********	1810.	94175.	124680.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2310.	92.	1.44
NITROGEN	34515.	72.	6.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
PAINT CREEK	0.960	569.8	0.693	2.268	28.	94.
BUFFALO CREEK	0.040	44.5	0.108	1.159	5.	50.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
MULE CREEK *	1.542	7.200

* BELOW POINT SOURCE.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - STILLHOUSE HOLLOW RESERV (MESOTROPHIC)
COUNTY - BELL OIR
STORET NO. - 4831 WORKING PAPER NO. 661. NTIS ACCESSION NO. PB-269 243/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	3413.60	26.02	11.3	8.260	1.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
162.	549.	2.4	0.018	0.010	0.160	0.415

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
3.9	0.1	(3/13/74) P (5/21/74) P (8/14/74) NO DATA (11/ 4/74) P

SUMMARY OF PHYTOPLANKTON DATA

3/13/74 GENERA	COUNT	5/21/74 GENERA	COUNT	8/14/74 GENERA	COUNT	11/ 4/74 GENERA	COUNT
CHROOMONAS	940	CHROOMONAS	386	CYCLOTELLA	123	CHROOMONAS	394
ELAKATOTHRIX	34	COELASTRUM	197	CRYPTOMONAS	93	CYCLOTELLA	219
STEPHANODISCUS	34	CRYPTOMONAS	72	OOCYSTIS	77	CRYPTOMONAS	175
NITZSCHIA	34	APHANOCAPSA	62	CRUCIGENIA	62	ANKISTRODESMUS	66
GYMNODINIUM	34	PEDIASTRUM	62	COSMARIUM	46	PEDIASTRUM	44
OTHER	32	OTHER	67	OTHER	201	OTHER	110
TOTAL	1108	TOTAL	846	TOTAL	602	TOTAL	1008

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	6350.	**********	**********	3235.	9585.
NITROGEN	19045.	**********	**********	256140.	275185.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3520.	63.	0.37
NITROGEN	143395.	48.	10.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LAMPASAS RIVER	7.510	3105.4	0.022	0.539	0.8	69.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
THIMMER CREEK	0.017	0.638
LUCY CREEK	0.023	0.543

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE TAWAKONI (EUTHOPHIC)
COUNTY - HUNT, RAINS, VAN ZANDT
STORET NO. - 4832 WORKING PAPER NO. 662. NTIS ACCESSION NO. PB-269 259/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	1957.90	148.52	7.7	11.260	3.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
79.	166.	0.8	0.046	0.013	0.100	0.630

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
18.2	**********	(3/ 9/74) N (5/17/74) P AND N (8/12/74) NO DATA (11/ 1/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/ 9/74 GENERA	COUNT	5/17/74 GENERA	COUNT	8/12/74 GENERA	COUNT	11/ 1/74 GENERA	COUNT
MELOSIRA	5861	STEPHANODISCUS	956	OSCILLATORIA	2750	OSCILLATORIA	359
STEPHANODISCUS	624	MELOSIRA	665	NITZSCHIA	2750	PENNATE DIATOMS	326
NITZSCHIA	587	KIRCHNERIELLA	541	MERISMOPEDIA	1550	DACTYLOCOCCOPSIS	196
CRYPTOMONAS	551	SCENEDESMUS	540	LYNGBYA	1250	MERISMOPEDIA	196
CHROOMONAS	441	CHROOMONAS	499	MELOSIRA	1200	MELOSIRA	163
OTHER	1299	OTHER	1747	OTHER	6152	OTHER	490
TOTAL	9363	TOTAL	4948	TOTAL	15652	TOTAL	1730

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	32175.	**********	**********	102530.	134705.
NITROGEN	62485.	**********	**********	876630.	939115.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	16350.	88.	0.91
NITROGEN	274870.	71.	6.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CADDO CREEK	1.790	505.0	0.172	1.416	23.	210.
COWLEECH FORK, SABINE R.	2.920	349.6	1.767	3.762	175.	995.
SOUTH FORK, SABINE RIVER	1.880	203.8	0.196	1.820	48.	515.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE TEXOMA (EUTROPHIC)
COUNTY - COOKE, GRAYSON TX:BRYAN, JOHNSON, LOVE, MARSHALL OK
STORET NO. - 4834 WORKING PAPER NO. 663, NTIS ACCESSION NO. PB-271 474/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	87500.50	360.18	5.7	147.693	173.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
128.	1342.	1.2	0.042	0.018	0.160	0.600

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
12.5	**********	(3/ 9/74) P AND N (5/17/74) N (8/ 9/74) NO DATA (10/31/74) P AND N

SUMMARY OF PHYTOPLANKTON DATA

3/ 9/74 GENERA	COUNT	5/17/74 GENERA	COUNT	8/ 9/74 GENERA	COUNT	10/31/74 GENERA	COUNT
CHROOMONAS	2270	DIPLONEIS	324	OSCILLATORIA	3886	OSCILLATORIA	2662
FLAGELLATES	900	CRYPTOMONAS	265	RAPHIDIOPSIS	1943	DACTYLOCOCCOPSIS	355
CENTRIC DIATOM	643	CENTRIC DIATOM	236	NITZSCHIA	1229	NITZSCHIA	310
ANKISTRODESMUS	514	SCENEDESMUS	177	LYNGBYA	991	CYCLOTELLA	266
CRYPTOMONAS	257	COELASTRUM	118	CENTRIC DIATOM	397	CHLAMYDOMONAS	222
OTHER	214	OTHER	794	OTHER	1349	OTHER	710
TOTAL	4798	TOTAL	1914	TOTAL	9795	TOTAL	4525

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	38495.	**********	225.	1439695.	1478415.
NITROGEN	112245.	**********	8445.	10862425.	10983115.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	591900.	60.	4.10
NITROGEN	6143655.	44.	30.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
RED RIVER	80.980	64351.1	0.406	2.435	16.	96.
HICKORY CREEK	1.550	318.6	0.352	2.291	26.	267.
WASHITA RIVER	45.140	18907.0	0.273	2.563	20.	191.
PENNINGTON CREEK	1.230	245.3	0.019	0.849	3.	134.
SANDY CREEK	0.340	57.0	0.045	0.997	9.	188.
MINERAL CREEK	0.373	64.7	0.205	1.756	6.*	169.*

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
MILL CREEK	0.037	0.705
BRUSHY CREEK	0.041	0.986
OIL CREEK	0.040	1.714

* ESTIMATED

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - LAKE TRAVIS (MESOTROPHIC)
COUNTY - BURNET, TRAVIS
STORET NO. - 4845 WORKING PAPER NO. 604. NTIS ACCESSION NO. PB-269 481/AH

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	58756.60	76.61	18.9	48.430	1.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
149.	451.	2.8	0.018	0.007	0.250	0.580

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
5.6	0.1 - 0.9 (2)	(3/15/74) P (5/22/74) P (8/20/74) NO DATA (11/ 6/74) P AND N

SUMMARY OF PHYTOPLANKTON DATA

3/14/74 GENERA	COUNT	5/22/74 GENERA	COUNT	8/20/74 GENERA	COUNT	11/ 6/74 GENERA	COUNT
CRYPTOMONAS	487	COELASTRUM	518	SYNEDRA	654	CYCLOTELLA	103
CHROOMONAS	244	FRAGILARIA	518	CYANOPHYTON FILAMENTS	256	CHLAMYDOMONAS	69
CHLAMYDOMONAS	41	CHROOMONAS	330	MELOSIRA	171	CRYPTOMONAS	69
OOCYSTIS	41	CRYPTOMONAS	188	TETRAEDRON	57	SCENEDESMUS	68
SCENEDESMUS	41	TETRAEDRON	141	COCCOID CHLOROPHYTA CELL	57	OOCYSTIS	34
OTHER	39	OTHER	236	OTHER	84	OTHER	70
TOTAL	893	TOTAL	1931	TOTAL	1279	TOTAL	413

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2325.	**********	15.	47060.	49400.
NITROGEN	5970.	**********	640.	1925525.	1933135.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	27165.	45.	0.64
NITROGEN	1121110.	42.	25.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
COLORADO RIVER	36.140	94081.7	0.035	1.253	0.4	15.
COW CREEK	0.340	110.6	0.016	1.207	1.	127.
PEDERNALES RIVER	7.460	3071.7	0.025	1.223	1.	92.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
BEE RIVER	0.011	0.637
ALLIGATOR CREEK	0.020	1.097
DOUBLE HORN CREEK	0.019	0.698
FLAT CREEK	0.010	0.598

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - TRINIDAD LAKE (EUTHOPHIC)
COUNTY - HENDERSON
STORET NO. - 4836 WORKING PAPER NO. 865. NTIS ACCESSION NO. PB-268 376/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	**********	2.99	3.1	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
202.	1037.	0.5	0.389	0.240	0.110	1.890

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
24.3	4.4 - 6.0 (2)	(3/11/74) N (5/17/74) N (8/12/74) NO DATA (11/ 1/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/11/74 GENERA	COUNT	5/17/74 GENERA	COUNT	8/12/74 GENERA	COUNT	11/ 1/74 GENERA	COUNT
SCENEDESMUS	13306	DACTYLOCOCCOPSIS	3752	MERISMOPEDIA	7025	ANKISTRODESMUS	6583
COSMARIUM	11416	GOLENKINIA	2047	LYNGBYA	6818	SCENEDESMUS	5596
CENTRIC DIATOM	10926	SCENEDESMUS	1933	NITZSCHIA	4821	NITZSCHIA	3950
GOLENKINIA	7214	CYCLOTELLA	1402	SCENEDESMUS	3720	MERISMOPEDIA	3456
NITZSCHIA	3082	MERISMOPEDIA	1213	CYCLOTELLA	3444	KIRCHNERIELLA	3127
OTHER	11415	OTHER	5229	OTHER	14395	OTHER	12014
TOTAL	57359	TOTAL	15576	TOTAL	40223	TOTAL	34726

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - TWIN BUTTES RESERVOIR (EUTROPHIC)
COUNTY - TOM GREEN
STORET NO. - 4837 WORKING PAPER NO. 666. NTIS ACCESSION NO. PB-268 334/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	6594.10	36.50	6.3	1.245	14.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
160.	575.	1.1	0.029	0.009	0.258	0.748

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
8.7	0.1	(3/ 4/74) P (5/15/74) P (8/ 5/74) NO DATA (10/29/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/ 4/74 GENERA	COUNT	5/15/74 GENERA	COUNT	8/ 5/74 GENERA	COUNT	10/29/74 GENERA	COUNT
SCENEDESMUS	1650	SCENEDESMUS	1594	RAPHIDIOPSIS	13554	CRYPTOMONAS	877
SYNEDRA	1317	CHROOMONAS	1593	FLAGELLATES	1055	CHROOCOCCUS	821
ANKISTRODESMUS	809	ANKISTRODESMUS	474	SYNEDRA	586	CENTRIC DIATOM	396
OOCYSTIS	326	RAPHIDIOPSIS	271	MERISMOPEDIA	469	ANKISTRODESMUS	283
CHRYSOPHYTAN CELLS	194	PEDIASTRUM	237	CARTERIA	430	DACTYLOCOCCOPSIS	255
OTHER	1403	OTHER	848	OTHER	2147	OTHER	481
TOTAL	5697	TOTAL	5017	TOTAL	18241	TOTAL	3113

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	1550.	1550.
NITROGEN	**********	**********	**********	111200.	111200.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	625.	60.	0.04
NITROGEN	16470.	85.	3.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MIDDLE CONCHO RIVER	0.210	3576.0	0.025	2.078	********** *	3.
SOUTH CONCHO RIVER	0.420	922.0	0.021	2.490	0.3	17.
SPRING CREEK	0.320	1025.0	0.026	2.866	0.2	29.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
DOVE CREEK	0.010	3.357

* LESS THAN 0.1.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - WHITE RIVER RESERVOIR (MESO-EUTROPHIC)
COUNTY - CROSBY
STORET NO. - 4838 WORKING PAPER NO. 667. NTIS ACCESSION NO. PB-268 418/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	2007.20	7.32	6.5	0.501	12.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
199.	644.	1.7	0.020	0.009	0.110	0.560

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
4.3	••••••••••	(3/ 6/74) N (5/14/74) P (8/ 6/74) NO DATA (10/28/74) P AND N

SUMMARY OF PHYTOPLANKTON DATA

3/ 6/74 GENERA	COUNT	5/14/74 GENERA	COUNT	8/ 6/74 GENERA	COUNT	10/28/74 GENERA	COUNT
CHLAMYDOMONAS	6692	CHROOMONAS	250	PENNATE DIATOMS	1326	CHROOMONAS	1086
CHROOMONAS	689	CHLAMYDOMONAS	156	APHANOCAPSA	489	APHANIZOMENON	965
APHANIZOMENON	170	ANKISTRODESMUS	125	CHROOMONAS	384	CYCLOTELLA	362
FRAGILARIA	67	APHANIZOMENON	94	CRYPTOMONAS	209	MELOSIRA	281
OOCYSTIS	42	COSMARIUM	94	ANABAENA	70	CRYPTOMONAS	201
OTHER	60	OTHER	62	OTHER	383	OTHER	482
TOTAL	7720	TOTAL	781	TOTAL	2861	TOTAL	3377

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	15.	445.	460.
NITROGEN	••••••••••	••••••••••	535.	20500.	21035.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	65.	86.	0.06
NITROGEN	3525.	83.	2.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WHITE RIVER	0.480	1906.2	0.020	0.797	0.2	6.

NAME - WHITNEY RESERVOIR (EUTROPHIC)
COUNTY - BOSQUE, HILL
STORET NO. - 4839 WORKING PAPER NO. 668. NTIS ACCESSION NO. PB-268 284/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	67780.20	95.35	8.1	48.776	0.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
125.	1920.	1.8	0.028	0.008	0.120	0.620

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
6.9	••••••••••	(3/ 8/74) P (5/16/74) P (8/13/74) NO DATA (11/ 1/74) P AND N

SUMMARY OF PHYTOPLANKTON DATA

3/ 8/74 GENERA	COUNT	5/16/74 GENERA	COUNT	8/13/74 GENERA	COUNT	11/ 1/74 GENERA	COUNT
SCENEDESMUS	804	SCENEDESMUS	382	OSCILLATORIA	2265	DACTYLOCOCCOPSIS	1261
OOCYSTIS	686	TETRAEDRON	127	LYNGBYA	1762	OOCYSTIS	850
CHROOMONAS	356	COELASTRUM	32	ANABAENOPSIS	1611	OSCILLATORIA	521
CRUCIGENIA	237	OSCILLATORIA	32	DIPLONEIS	1007	MERISMOPEDIA	274
ANKISTRODESMUS	185	EUGLENA	32	PENNATE DIATOMS	705	TETRAEDRON	274
OTHER	383	OTHER	80	OTHER	2266	OTHER	576
TOTAL	2651	TOTAL	685	TOTAL	9616	TOTAL	3756

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	11170.	••••••••••	250.	106460.	117880.
NITROGEN	13495.	••••••••••	9425.	1624540.	1667460.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	28815.	76.	1.24
NITROGEN	1395635.	16.	17.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BRAZOS RIVER	42.170	65824.8	0.095	0.938	1.	19.
CEDRON CREEK	0.470	108.8	0.817	0.650	2.	95.
STEEL CREEK	0.920	233.1	0.815	0.713	2.	100.
NOLAN RIVER	2.870	909.1	0.455	1.958	40.	185.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
MESQUITE CREEK	0.020	0.715
CAMP CREEK	0.022	0.767
HALEY BRANCH	0.169	1.213

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN TEXAS

NAME - WRIGHT PATMAN (EUTROPHIC)
COUNTY - BOWIE, CASS
STORET NO. - 4833 WORKING PAPER NO. 649, NTIS ACCESSION NO. PB-268 307/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	8917.40	126.13	3.0	75.517	57.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN ORTHO P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
49.	203.	0.5	0.106	0.030	0.120	0.660

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
19.1	1.3 - 5.5 (2)	(3/22/74) N (5/31/74) N (8/23/74) NO DATA (11/ 8/74) N

SUMMARY OF PHYTOPLANKTON DATA

3/22/74 GENERA	COUNT	5/31/74 GENERA	COUNT	8/23/74 GENERA	COUNT	11/ 8/74 GENERA	COUNT
MELOSIRA	5495	CENTRIC DIATOM	4824	MELOSIRA	2795	MELOSIRA	1211
CENTRIC DIATOM	1672	MELOSIRA	1495	OSCILLATORIA	2056	CHROOMONAS	413
NITZSCHIA	1593	PENNATE DIATOMS	1158	NITZSCHIA	1529	DACTYLOCOCCOPSIS	338
CHROOMONAS	1276	CHROOMONAS	579	LYNGBYA	1002	OSCILLATORIA	248
DACTYLOCOCCOPSIS	637	MERISMOPEDIA	338	DACTYLOCOCCOPSIS	738	NITZSCHIA	221
OTHER	1552	OTHER	1846	OTHER	3586	OTHER	1296
TOTAL	12227	TOTAL	10240	TOTAL	11706	TOTAL	3717

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	35770.	**********	**********	222725.	258495.
NITROGEN	105995.	**********	**********	2212490.	2318485.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION LOSS	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	294439.	3.	2.0
NITROGEN	2247780.		18.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ROCK CREEK	0.200	27.2	0.063	0.676	15.	159.
ELLIOT CREEK	0.160	21.5	0.062	0.664	18.	156.
CANEY CREEK	0.140	18.4	0.053	0.713	12.	169.
HIG CREEK	0.300	40.4	0.369	1.126	9.	25.
HICE CREEK	0.340	46.6	0.068	0.848	20.	196.
WHITE OAK CREEK	13.340	1712.0	0.116	1.016	20.	227.
SULPHUR RIVER	20.960	3535.3	0.138	1.046	32.	268.
CUTHAND CREEK	9.160	600.9	0.107	1.031	29.	279.

VI. MEAN NUTRIENT CONCENTRATIONS IN UNGAGED STREAMS

STREAM NAME	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)
EAST FORK, ELLIOT CREEK	0.172	2.241

ANDERSON CREEK	0.160	1.225
HORSE CREEK	0.109	0.920